Negotiating with a Captive Audience in Kennedy Heights, TX

Settling Environmental Justice Litigation with a Special Master

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> It's really hard not to just give up in despair, because you have to keep on living, regardless of the circumstances you live in. And one thing is true about this, we do believe that there's a being that will look out for us, you know, a lot of people don't think that's popular, but it does give you some comfort. Because I can't go around saying oh, I live on top of a, I can't do that, because I can't move. I have to work. But sometimes, that will creep in on you, but I don't let it take me over – Resident of Kennedy Heights, 2002.

Background. Whether viewed from the air or on the ground, Kennedy Heights does not evoke the kinds of images that predominate in accounts of environmental injustice. Yet subtle clues of the land's history, which propelled residents through one of the most expensive (and to many involved, costly) environmental justice lawsuits in history, emerge as one walks the streets of this subdivision in southwest Houston. A plot of land is left undeveloped, sidewalks appear to have buckled and cracked at certain points, and a few yards seem in the process of gradually sinking in. Starker signs of environmental neglect are prevalent, but only to those who must daily question their land, or find a way to justify putting it out of their minds. The locus of residents' concerns is the water. Many Kennedy Heights residents appear to have abandoned trying to drink their tap water, but stories of the many shades and smells of water used for cooking and bathing are still common. To this day, some of the residents have not been given what they feel is a definitive account of whether the source of these signs is a continuing threat to their health, or just an unfortunate vestige of another time. This uncertainty is directly related to prior uses of the land upon which Kennedy Heights was built, dating back many decades.

Figure 1. Kennedy Heights (rectangle) and Approximate Crude Oil Storage Tank Locations.

The Pierce Junction oil well yielded as much as a quarter of a million barrels of oil every two months during the 1920's.[1] Discovered in 1921, it was connected by pipeline to a series of pits, including three unlined, earthen storage tanks southeast of Houston, known as the Mykawa Tank Farm. These pits, each with the capacity to hold 300,000 barrels of crude oil, were

[1] Pierce junction well flows 250,000 barrels in two months period. *The Houston Chronicle*, September 2, 1921.

located to the south of Selinsky Road and to the east of what is now Cullen Boulevard (then Chocolate Bayou Road) in the Kennedy Heights subdivision.[2] The northeast (NE) and northwest (NW) pits were operational and covered with lumber roofing while the southeast (SE) pit simply filled with brine.[3] The storage tanks were partially destroyed by a hurricane that broke apart the wooden roofs covering the tanks in 1927. Because of the damage as well as marginal production at the Pierce Junction field, owners Gulf Production Company (Gulf Oil) ceased operations at the tank farm.

Figure 2. Earthen Pits Prior to Residential Development.

While use of the property after the pits were abandoned is subject to debate, it is clear that the site would accommodate other land uses over the course of the next four decades.[4] The pits remained visible in aerial photographs taken in 1935, 1945, 1955, and 1969.[5] Plaintiffs later alleged that during much of this time, Gulf Oil failed to "secure the site from the public and, as a consequence, municipal waste, junk, debris, rubbish, and hazardous substances were deposited at the site."[6] In the mid-1960's, Gulf had the site appraised and began to take steps to relinquish their control over the property. The appraisal documents include references to desired levels of racial segregation, and refer to the land near the tank farm, located near Chocolate Bayou, as a "typical Negro area."[7]

> Should this land be developed for low- to medium-priced housing with FHA or VA financing, it would have to be a bi-racial development according to present regulations. It is felt that eventually this would be the highest and best use of this property because it would then serve as a

[2] Statement showing amount of tankage capacity location and quantity of crude petroleum owned by the pipe line, also amount held in storage for others and unfilled storage at close of business, November 30, 1924, received December 15, 1924 by the Texas Railroad Commission.

[3] Deposition upon written questions of James F. Stephenson, *John R. Simmons et al. vs. Chevron U.S.A., et al.* (C.A. No. 95-14770).

[4] For example, some documents suggested that Gulf leased the property to local dairy farmers and cattlemen. A review of aerial photographs from 1930 to the 1960's revealed evidence of cows in a field southeast of the NW pit in 1955.

[5] Krentz, D. (1991). Interoffice correspondence from to Anthony Crisci, Capital Projects, City of Houston from David Krentz, Environmental Health and Human Services, October 30, 1991.

[6] Plaintiffs' Second Amended Complaint, *Adams et al. v. Chevron U.S.A. et al.* (96-CV-1462) (S.D. Tex, October 1, 1996). In a letter to a city official, the contractor who first encountered signs of crude oil contamination also noticed items that appeared to have been dumped in the area of the former pits ("6/3/91 – Hit Foreign Debris at 5002 Fairgreen"; "8/5/91 – Hit Car Rim 11326 Murr Way, underground"; "12/3/91 – Murr Way Station #32+55 (car door)"; "12/3/91- Murr Way Station #32+55 (tire)"). Paskey, C.W. (1992). Letter to Richard Scott, Deputy Director, Capital Projects Department, City of Houston from C.W. Paskey, Construction Coordinator, Pas-Key Construction Services, Inc., August 27, 1992.

[7] Wyatt, E.A. (1966). Letter to M.L. Hanna, Gulf Oil Corporation from Earl A. Wyatt, Earl A. Wyatt and Associates, August 15, 1966.

> buffer between the white residential area in Crestmont Park and the heavily colored developments to the north and west.[8]
>
> We feel by being surrounded by negro subdivisions this property is committed to a use, either for subdivision purposes or other, by this element. Eventual industrial use may be foreseeable; although, this seems unlikely with the nearest trackage available two miles away.[9]

Such references to the demographics of the area are striking. Yet they mask a more important distinction that was made in appraisal documents for the tank farm. Prior to sale of the property, efforts began to discern the appropriate cost of the land purchased with the storage tanks filled, *after* their contents ("sludge," or the remnants of stored crude oil[10]) were removed.

> The present worth of subject property is its market value less the cost of draining, filling, and leveling the three large open tanks. Mr. R. Salmon, a dirt moving contractor, estimates it will take 3 months or longer to do this work, at a cost of $2,500 per tank. Mr. Neville of Humble figures his cost at $1,500 per acre of tank on some tanks in Humble that have as much as six feet of B.S. & W. These tanks are approximately 400 feet square, and it is felt that $5,000 per tank is a safer estimate of cost, as it is not known how much experience Mr. Salmon has actually had in this type of work. Like Mr. Neville, Mr. Salmon would spread out the sludge on the land to dry. It is felt that land east of Chocolate Bayou Road will not sell as high as land adjoining a present residential development, especially where this land will have to be developed as a buffer zone between colored and white areas. For the above reason it is felt that the price being asked for the 29 acres fairly well represents the price at which a residential developer would buy subject property, if it were in its original condition and free and clear of tanks.[11]
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> Highest and best use: The most profitable use for this land appears to be for medium priced houses for white occupancy, with a 200-foot-wide commercial strip fronting on Chocolate Bayou Road as a buffer strip against the all colored Cloverland Subdivision on the west side of Chocolate Bayou Road.[12]
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> This area is both colored and white, with Chocolate Bayou Road serving as the dividing line. Because of colored settlements across the road to the west the highest and best use for this land appears for low cost homes for white occupancy. The three large open earthen pits on the land will have to be filled before subdivision work can proceed on all the land. This may cost from $2,500 to as much as $5,000 per tank.[13]

For six years, Gulf Oil "unsuccessfully attempted to dispose of this acreage."[14] The company then began negotiating with John Lester, President of Log Development Company, who was interested in "acquiring the site for a Negro residential and commercial development."[15] In 1968, Gulf Oil granted, sold, and conveyed the site to

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[8] *Ibid*.
[9] Clemons, R.E. (1961). Letter to J.L. Irvine, Vice President, Gulf Refining Company from R.E. Clemons, The Clemons Company, January 5, 1961.
[10] The contents of crude oil storage tank bottoms include a mixture of crude oil, water, and other substances commonly referred to as basic sediment and water, or BS&W.
[11] Wyatt, E.A. (1964). Appraisal of 131.61 acres of land, John White Survey, A. 1001, Harris County, Texas, by Earl A. Wyatt, for M.L. Hanna, Gulf Oil Corporation, February 10, 1964.
[12] *Ibid*.
[13] Wyatt, E.A. (1964). Letter to M.T. Hanna, Gulf Oil Corporation, February 17, 1964.
[14] Memorandum from P.J. Maddison to R.B. Gillies regarding Exchange of Properties, Pierce Junction Earthen Tank Farm, Chocolate Bayou Road, Houston, Texas, November 14, 1967.
[15] *Ibid*.

Log Development.[16] The transaction involved a tax-free exchange of the Pierce Junction Tank Farm (valued at $274,107) for the northwest corner of Richmond and Montrose, in Houston.[17] Log Development did not remove any tank bottoms in the area of the earthen tanks utilized by Gulf, a practice that had been suggested for the property when it was assumed that it would become a white subdivision.[18] Lester simply had the berms along the sides of the pits pushed inward, filling the pits.[19] The Kennedy Heights subdivision replaced the Mykawa Tank Farm in the late 1960's.

The Problem. The name of the subdivision, its location, a savvy marketing campaign, and documents obtained from Log Development suggest that in the end, the homes were targeted at below-middle-income African-American residents. The subdivision quickly filled with families realizing the American dream of owning their own home for the first time. However, several aspects of the subdivision seemed "off" to the new residents. Sidewalks and backyards began to buckle and sink. Residents noticed putrid smells and strange colorations in their tap and bathwater. Some even fell ill to diseases that were not in their family histories, including multiple forms of cancer as well as lupus. One individual had to cope with four different forms of cancer nearly simultaneously.

> Well, what I remember though, when I was a kid, we used to crawfish in the ditch behind the house, and I remember the soil had like four or five different levels. It was like orange, purple, blue, and I guess reddish, plus the dirt on top. But as a kid, I didn't know what it was.[20]

> I've been in Kennedy Heights for 30 years. I waited for my house to be built over there, so that's how long I've been here. And as having young kids there, the water has always been bad. We tried putting water filters, everything on the water. And really I wish I would have kept the filters. Because the filters that we would take out, it was filled with oil and green gook and everything else. So finally it got so bad to where we were afraid to drink the water even with filters. We changed filters 2-3 times a month and it still was bad, so we had to start buying water to drink. And we've always had dogs in the backyard. And every dog we've had, anytime they would dig, they would die. At first we thought somebody was poisoning them. But after we looked at it, anytime they would dig deep in the yard, they would die. So every dog we had in the back, that's what happened to them. And we had a pear tree in the back and it was like one side of it would bear pears and one side wouldn't. So the side that didn't bear pears, that's where the dogs would dig all of the time and evidently there was something there.[21]

> There's too many deaths for the amount of people. And that's what got somebody's attention. That too many people were getting sick and dying. And there were too many abnormalities and birth defects in people. I mean, you know, even whole households, everybody was sick. You know, not just one.[22]

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[16] State of Texas, County of Harris (1968). Conveyance of property from Gulf Oil Corporation to Log Development Company, Inc., January 29, 1968.
[17] Maddison, P.J. (1967). Letter to R.B. Gillies from P.J. Maddison regarding exchange of properties, Pierce Junction Earthen Tank Farm, Chocolate Bayou Road, Houston, Texas, Richmond and Montrose, Houston, Texas, November 14, 1967.
[18] Affidavit of John R. Lester, *Dorothy Adams, et al. vs. Chevron, et al.* (C.A. No. H-96-1462).
[19] Verdicts Forecast (1997). Kennedy Heights case narrative. http://66.12.145.114/vf/narrative/html (Accessed December 4, 2002).
[20] Interview with Kennedy Heights resident, April 20, 2002, in Houston.
[21] Interview with Kennedy Heights resident, April 20, 2002, in Houston.
[22] Interview with Kennedy Heights resident, April 15, 2002, in Houston.

> Like on my side, it was like every other house, somebody had died of cancer. You don't tell me that's normal. That's not normal. [The special master] was trying to tell us that that was normal in a neighborhood. It's not. This was just on one side, within a block. I'm not talking about the other side, or down the street. Just one side. You're talking about 12 houses and every other house, somebody has died with cancer.[23]

A more prevalent concern to local residents than even disease and health problems was the fact that the water lines under subdivision properties would continuously rupture. One resident, a school teacher, recorded important events on the inside cover of her husband's Bible:

> Lord help us. We are your children. God, seems like the water is making Albert sick. Lord help him.
> September 12, 1971. The water has broken again.
> October 4, 1971, water break.
> October 22, 1971, water break. The water smells real bad today. It's yellow-looking. What are we going to do?
> April 5, 1972, water break.
> April 26, 1972. The pipes are rusty, the workers said to let the water run a long time.
> July 1973, the water has broken again. Albert is sick. Lord, I have called the city. They won't fix the water.
> April 1975, water breaks.
> June 1975, water breaks.
> December 1975 water break.
> May 1976, water breaks.
> November 12, 1976, water breaks.
> January 1, 1977. New Year's Day. The water breaks. I can't cook.
> January 20, 1977, water breaks again.
> May 10, 1977, water breaks.
> May 8, 1978. City put in a blue plastic pipe. Hope it will hold.
> This is May 3, 1981. The pipes burst.
> Oh, God. The pipes are bursting.
> Feb. 4, 1982. Pipe burst.
> June 19, 1983. Pipe burst. I can't cook. Lord, what's next?[24]

In spite of countless complaints made to the city for twenty years, Houston's Capital Projects Department did not begin major work on pipe excavation and replacement until the early 1990's.[25] A contractor, Pas-Key Construction Services, was sent to excavate a site on Murr Way in order to replace some of the waterlines. On September 18, 1991, the contractor shut down the site when a worker collapsed during site excavation. Other employees remarked that there was a creosote odor in the area and complained of eye irritation.[26] The workers left a sizable hole in the ground and "ceased all construction operations until further notice from the City of Houston Health Department."[27] Residents began to wonder why the work had ceased. Perhaps the pipe replacements were part of a

[23] Interview with Kennedy Heights resident, April 20, 2002, in Houston.
[24] Taken from the inscriptions made on the inside cover of *The Holy Bible*, Michelangelo Edition, owned by a resident of Kennedy Heights.
[25] Even after litigation began, City of Houston Utility Complaint Notices from July 14, 1995 to September 29, 1996 reveal at total of 108 utility complaints made by Kennedy Heights residents. Residents continue to complain of water main breaks.
[26] Pas-Key Construction Service, Inc. (1992). Report on Water Project No. 10086.
[27] Paskey, R.L. (1991). Letter to Howard Nicholas, Director of Capital Projects Department, Department of Public Works from R.L. Paskey, Pas-Key Construction Service, Inc., September 26, 1991. Thereafter, the Director of Health and Human Services for the City of Houston recommended that "excavations in the Kennedy Heights subdivision be temporarily halted." October 15, 1991 doc.

broader effort to increase the number of units available within the subdivision, as word spread that a low-income housing development was in the planning stages.[28]

Unbeknownst to the residents, the city of Houston hired a contractor (Lockwood, Andrews, and Newnam, Inc. [LAN]) to investigate potential petroleum contamination at the site. This occurred after Public Utilities Branch personnel sent to the site by the city noted a "creosote like odor in the air" and found trihalomethanes (a volatile organic compound) and evidence of the possible occurrence of 1,1,1 trichloroethene.[29] Soil borings drawn along the water main replacement route at 0-10 feet found contamination at a depth of 2-7 feet, including petroleum hydrocarbons "not normally indigenous to surface soils."[30] While the city's analysis of samples taken from the two water mains near Murr Way (where Pas-Key work had ceased) suggested "no contamination of the potable water supply system," LAN, Inc. found concentrations of total petroleum hydrocarbons (TPH) above levels recommended by the Texas Water Commission (TWC) for soil contamination.[31] It was also argued by the city's Director of Health and Human Services that replacement of water lines should continue, to allow for "higher water pressure" that would "decrease the probability of groundwater infiltration."[32] It would later be determined that the community's water lines ran through the layer of soil where the some of the highest concentrations of hydrocarbons were found. Plaintiffs would argue that contamination migrating through ruptured pipes was the primary route of exposure to the residents.

The full results of the city's testing efforts were not initially shared with residents or the contractor.[33] The Texas Water Commission (TWC), Texas Railroad Commission (RRC), and regional office of the Environmental Protection Agency, on the other hand, were contacted. A TWC official arrived to conduct a site inspection, but because the excavated site had been filled in, he was not able to take samples (according to what are

[28] A new section of the Kennedy Heights subdivision was developed in 1994 and started accepting residents in July of that year. The developers engaged in one of the first environmental reviews of the area, which included soil and groundwater tests of the vacant property by Law Environmental Inc.
[29] City of Houston (1991). Report of laboratory investigation of samples collected from Murr Way locations, City of Houston Public Utilities Branch, Laboratory Section, September 18, 1991.
[30] Arradondo, J.E. (1991). Letter to Howard N. Nicholas, Director, Capital Projects Department from John E. Arradondo, Director, Health and Human Services, October 15, 1991. City officials did not know "exactly what the man-made pits were used for" at this point, although they had obtained aerial photographs indicating the three large pits, each four acres in size.
[31] Lockwood, Andrews, & Newman, Inc. (1991). Potentially petroleum contaminated materials investigation, Kennedy Heights Subdivision. Prepared for the City of Houston, Project No. 10086, November, 1991. Concentrations of total petroleum hydrocarbons that were above action levels for soil contamination set by the TWC were found in soil samples from five of the 21 soil borings.
[32] Des Vignes-Kendrick, M. (1992). Inter Office Memorandum to Director of Capital Projects, City of Houston from M. des Vignes-Kendrick, MD, MPH, Interim Director, Health and Human Services regarding Kennedy Heights Contaminated Soil Complaint, February 6, 1992.
[33] In a summary of Water Project 10086, Pas-Key states that "Because the City had not transmitted to Pas-Key the promised test results, on January 22, 1992 Pas-Key submitted various soil samples to Dr. Edwin B. Smith, a consultant retained and paid by Pas-Key. Pas-Key Construction Service, Inc. (1992). Report on water project number 10086.

now TNRCC guidelines).[34] Residents, who had begun to meet as part of the Kennedy Heights Civic Association, formed a Contamination Committee and collected money to pay for their own environmental consultant. Pas-Key also hired a consultant to investigate the site. By January 1992, the contractors hired by Pas-Key found that "the contaminant is creosote mixed with crude oil which will cause skin rash, dermatitis, and breathing difficulties."[35] Four streets were listed as affected by the city's sampling activity, although until this point contractors had focused predominantly on the excavation area.[36] A contractor hired by the residents found even higher levels of polyaromated hydrocarbons in the soil.[37] At around the same time, the TWC changed its policy for analyzing hydrocarbons.[38]

The pace of activity picked up in 1994-5, when American Home Dream Corporation requested an investigation of potential contamination at the site of a proposed additional 53 units within Kennedy Heights.[39] The contractor, RRC, and Chevron met to discuss the results, starting a trend where environmental scientists, regulators, and the regulated would meet regarding the site, at times without the input of the affected community. Meanwhile, John Simmons, who headed the Kennedy Heights Civic Association at the time, began an investigation of his own, finding enormously high rates of cancer and lupus through an informal survey of the subdivision's 325 homes.[40] Simmons approached one of the most well-known trial attorneys in the region, and the first step taken by John O'Quinn and his associates was to seek temporary injunction against a new

[34] A TNRCC official familiar with the Kennedy Heights investigation stated: "When we received the complaint in 1991 and went out and took a look at what was going on. Yeah, when the investigator actually got to the site, the excavation would have been for the placement of the water line and they had already filled that in when the investigator went out there. [If it had not been filled], it's possible that there could have been a sample taken." Interview with Texas Natural Resources Conservation Commission official, May 28, 2002, via telephone.

[35] Smith, E.B. (1992). Letter to Robert Paskey, Owner, Pas-Key Construction Service, Inc. from Edwin B. Smith, EFEH and Associates, January 29, 1992.

[36] Barnard, P. (1992). Letter to Robert Paskey, President, Pas-Key Construction Services, Inc. from Philip D. Barnard, P.E., Assistant Director, Capital Projects Department regarding Water Project #10086, March 20, 1992.

[37] John Hanby, the consultant hired by the Civic Association, found "extremely high levels of petroleum-related chemicals" in the soil, with concentrations "several times higher than the city's highest reading." Dawson, B. & Robinson, J. (1994). Housing project site may be contaminated. *Houston Chronicle*, February 15, 1994, p. A-1.

[38] Rhyne, A. & Meyers, S. (1992). Interoffice memorandum to all laboratory personnel from Sheila Meyers and Anne Rhyne, Quality Assurance Specialists, Field Operations Division, September 3, 1992 ("The purpose of this letter is to inform the laboratories that the TWC will only accept method 418.1 from 'Methods for Chemical Analysis of Water and Wastes' as an acceptable method for analysis of Total Petroleum Hydrocarbon (TPH) of water, soil, and wastes…a decision has been made to withdraw ASTM method 3328-78-B as an acceptable method").

[39] Prehmus, C.A. & Pickett, K.L. (1994). Proposal for phase I additional research and limited phase II – field sampling and laboratory testing program, Kennedy Heights subdivision, Houston, TX from Cynthia A. Prehmus, Project Environmental Scientist and Kendall L. Pickett, Principal, Law Engineering and Environmental Services to Sid Stephenson, American Home Dream Corporation, February 18, 1994.

[40] A survey taken by Simmons showed that there were 113 cases of cancer, brain tumors, lupus, and birth defects in the subdivision's 325 homes. Cable News Network (1997). Houston residents sue Chevron over health problems. http://www.cnn.com/US/9705/26/toxic.controversy/html (Accessed November 30, 2002).

contractor hired to complete the work of Pas-Key. The injunction was granted, and a case was set for trial.[41]

Attempts to sort through accounts of possible contamination under the Kennedy Heights subdivision were made on two parallel tracks: by the Texas Railroad Commission (and, near the conclusion of settlement negotiations, the EPA), and by the courts. The RRC initially assessed the neighborhood in 1994, by reviewing results of the city Health Department's earlier tests for contamination and above-ground visual survey.[42] Based on the city's data, the RRC concluded that there was no basis for the initiation of cleanup activities. To encourage regulatory action, residents began a letter writing campaign in August 1995, sending letters to the TNRCC and the RRC which urged them to investigate the reported contamination under their homes.[43] An attorney representing John Simmons and other families (approximately 2,000 individuals at the time) also presented a letter to the Chairman of RRC containing 68 pages of signatures and citing findings of "explosive levels" of methane gas under certain homes. RRC involvement began in earnest on August 23, 1995, when Commission and Chevron representatives met to discuss the site. As much of the emphasis of plaintiffs' motion for a temporary injunction against the new contractor focused on the threat of explosive levels of methane, Chevron proposed the installation of several gas monitoring wells in areas where high levels of subsurface methane had been previously identified.[44] The stated purpose of the testing was to "assist in identifying the source of the gas" and to inform the applicability of surveying homes in the subdivision for gas concentrations within the residences.

Chevron presented its initial Methane Investigation Proposal in September 1995. The proposal called for three gas monitoring wells that would use push tools in areas of "highest reported gas concentrations" (as found by residents' contractors[45]) to take

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[41] Order Granting Temporary Injunction, *John R. Simmons, et al. v. Chevron, U.S.A., et al.* (Cause No. 95-14770) (Tex. Dist. 281, June 3, 1996).

[42] Flynn, G. & Dawson, B. (1995). Relocation of residents proposed: Kennedy Heights area contaminated. *Houston Chronicle*, August 8, 1995, p. A1.

[43] Over 200 letters were received by RRC, mostly in September. Most of the letters followed a similar format. Some included entirely unique portions, such as a letter sent by Anita Smith, a resident of Kennedy Heights:

> We the residents in the Kennedy Heights subdivision area have relatives that have died. And we still have family, neighbors who are still dieing and we have children who are having liver, kidney, tumers, and heart problems. And there are more than just that of problems and a lot of residents and their family are having. And we have some children who will not grow…I also have a four-year-old…ever since he was born he have had the liver problem he born with a piece of his liver missing. Please. We need your help bad get us out of here. The people of Kennedy Heights need help now.

[44] Tintera, J. (no date). Memorandum to Brenda Loudermilk, Special Counsel from John Tintera regarding Status of Kennedy Heights Investigation, Harris County, Texas.

[45] In the EPA's final report on the site, it was indicated that "Methane has been reported at concentrations ranging from 25,000 to 480,000 ppm in samples collected by the residents' contractors." Ecology and Environment, Inc. (2001). Expanded Site Inspection Final Report, Kennedy Heights, Houston, Harris County, Texas, prepared for U.S. Environmental Protection Agency, Region 6, May 2001, p. 3-3.

samples at two-foot intervals (vertical).[46] The sample with the highest TPH reading for each well would undergo additional testing for PAH's, metals, volatiles, semi-volatiles, and hazardous characteristics. In addition, 12-15 soil borings were to be taken to a depth of 4 feet to test for lower explosive limits of methane, CO2, and O2. This was the first of several attempts to measure the extent of contamination in Kennedy Heights by Chevron. They were based on a series of assumptions that were contested by plaintiffs. Tables 1 and 2 provide a sample of the concerns raised by RRC staff and plaintiffs during testing at the subdivision.

Table 1. RRC Concerns Regarding Chevron Sampling Proposals for Kennedy Heights.

Chevron Proposal	Date	RRC Concerns
Methane Investigation Proposal (resubmitted as Installation of Gas Monitoring Wells for the Measurement of Methane Concentration and Flux Rates from Soil)	September 9, 1995 (revised October 11, 1995 and resubmitted December 7, 1995)	• Need to provide estimated time frame for conclusion • Clarify volumes to be evacuated through tubing • Provide approximate location of proposed 12-15 in-situ borings • Expand on reasons for limiting the shallow borings to a depth of four feet • Comment on whether Chevron still plans to pursue determination of the origin of the methane gas • Comment on why intervals of one and two months for sampling were chosen[47]
Comprehensive Work Plan for Kennedy Heights Subdivision (updated ADD)	October 18, 1996 (3rd Draft)	• Should include conceptual site model and data quality objectives that will explain purpose of various aspects of plan • No deep monitor wells planned within pit boundaries, the most likely site of groundwater contamination – install within each of northern pits • Justify sampling frequency and intervals • Need rationale for number of drinking water samples, residences being tested, and timing of samples • How will locations for line break sampling be identified • Explain difference in analyte list for line break areas and the testing of tap water • Methane sampling should use statistically valid representative number of residential foundations at NE pit • Provide details for beneath-slab methane testing, standard procedures for such testing, statistical analysis for #, location of methane background sampling points • Additional samples needed in utility backfill zones • Should focus on genesis and pathways of methane; consider testing additional gases • Will Chevron conduct ambient air sampling in interior of all residences over NE pit? • Explain how proposed soil sampling will provide sufficient data for a credible risk assessment, particularly in shallow zones[48]

[46] Railroad Commission of Texas (1995). Kennedy Heights Chevron Methane Investigation Proposal RRC Comments, October 17, 1995 (Draft); Railroad Commission of Texas (1995). Kennedy Heights Summary, 11/95.
[47] *Ibid*.

Table 2. Resident Concerns Regarding Chevron Sampling Proposals for Kennedy Heights.

Chevron Proposal	Date	Resident Concerns
Methane Investigation Proposal (resubmitted as Installation of Gas Monitoring Wells for the Measurement of Methane Concentration and Flux Rates from Soil	September 9, 1995 (revised October 11, 1995 and resubmitted December 7, 1995)	• Vapor phase hydrocarbons are from 2-11 feet with random, thin, and discontinuous distribution • Pockets of liquid and residual hydrocarbons are at 5-26 feet; sampling is too shallow at 4-10 feet • Three wells is inadequate • Need in-situ and discrete samples with depth instead of 5 foot screens, to avoid dilution of samples • Samples will vent; will not be able to measure concentration, generation, or flux • Should test for a greater variety of PAH's • Vertical averaging will depress values • Fractures in clay can intersect methane pockets, allow gas to migrate to homes with cracked slabs • Methane will be generated until food source (hydrocarbons) is removed[49] Concerns post-investigation: • Systematic tight grid approach not used • Chevron "abandoned" sampling if no results, reported "no vapor" when should state "no sample" • Calculations for generation of methane based on inappropriate assumptions • Soil descriptions, video tapes do not support statement that grass roots caused elevated levels of methane • Comments that subsurface methane would render landscape barren are unsupported • Neglects methane accumulations beneath foundations[50]
Comprehensive Work Plan for Kennedy Heights Subdivision	October 18, 1996 (3rd Draft)	• TNRCC regulations for residential exposure limits should be considered to determine acceptable levels of contamination • TNRCC should be involved due to the presence of chlorinated hydrocarbons • Chevron uses random rather than systematic sampling and too few samples within pits • There is no effort to locate the boundaries of the former pits • Monitor wells are too shallow at 5 feet • Chevron attempted to abandon a sampling effort in previous testing • Further testing should include tight grid of 50 feet for soil borings, borings where ETI sampled, borings and wells up to 14 feet, mapping of petroleum contaminated soils, testing for TPH using methods 418.1 and GC 8015B (before this only used 418.1)[51]

Residents' representatives and RRC staff were able to comment on several iterations of Chevron proposals, although this process was at times disjointed. RRC records indicate

[48] Railroad Commission of Texas Oil and Gas Division (1996). Comments on Chevron's Comprehensive Work Plan for Kennedy Heights Subdivision, Houston, Texas Dated October 23, 1996.
[49] *Supra* note 44.
[50] Railroad Commission of Texas (1996). Summary of Residents Representatives Methane Comments, March 20, 1996.
[51] Railroad Commission of Texas (1996). Kennedy Heights Residents Representatives Letter of 4/3/96.

that certain meetings to discuss sampling efforts were held exclusively among Chevron and RRC representatives.[52] Still, subsequent iterations of testing proposals made some improvements in sampling methodology, in response to RRC and resident concerns. As sampling began, RRC and resident representatives were also present to observe and record (by video tape) Chevron's efforts and to split samples for their own analysis when desired.[53] The RRC adopted a statistical sampling frame for split samples, in addition to the splitting of samples with visible contamination. An RRC staff member recorded notes during a meeting with Chevron less than a week before testing was to begin:

> Noon on Monday
> Any violence leave
> Safety #1…
> Any questions about Chevron's plan will be referred to Chevron…
> What to say:
> 1. On top of situation
> 2. We are monitoring the situation
> 3. Long as it takes
> 4. Chevron foot the bill, not the taxpayers…
> Sample splitting priority:
> 1. Chevron
> 2. Plaintiff
> 3. RRC…
> Soil gas permeability we will not be involved in…
> Pick worst looking samples for analysis[54]

On December 7, 1995, an RRC staff member was told that he had the authority to contract for equipment and materials that would be needed to analyze the soil samples for methane gas and other contaminants that RRC planned to split with Chevron. The official was told, "It is understood that the cost of this operation shall not exceed $2,500."[55] At the same time, an attorney for the plaintiffs requested that the RRC observe certain sampling efforts on behalf of the residents.[56] Some of the final preparations made by RRC included coordinating plans for responding to media interest. Interoffice correspondence regarding sampling activities would often include a characterization of media interest and any RRC response. Before testing started, Chevron's public affairs representative was told by an RRC official that his plan was to "respond to media inquiries about RRC monitoring roles but to refer questions about the

[52] For example, meetings held in May and December, 1996 included only RRC, Chevron, and consulting firm representatives. RRC/Chevron Kennedy Heights Meeting, 5/13/96 Sign-in sheet; KH Chevron Technical Mtg., 12/6/95 Sign-in sheet.
[53] December 6, 1995 doc. Some of the questions raised regarding split samples were whether Chevron would provide sample containers to RRC, whether they would be loaded under RRC observation, and whether Chevron would avoid RRC's personnel decontamination.
[54] Railroad Commission of Texas (1996). 12/6/95 Meeting with Chevron. Handwritten notes to meeting.
[55] Tintera, J. (1995). Letter to Guy Grossman, District Director, Railroad Commission of Texas from John James Tintera, Assistant Director, Site Remediation, December 7, 1995.
[56] Boyt, J. (1995). Memorandum to Chairman Rylander, Commissioner Williamson, and Commissioner Matthews from Jeb Boyt, Staff Attorney, Railroad Commission of Texas, December 8, 1995.

testing, sampling, analysis, timetable, etc. to him."[57] By December 15, Chevron's methane investigation was ongoing with what had become four gas wells installed.[58]

Testing continued at predetermined intervals from mid-December 1995 to February 15, 1996. Preliminary data yielded 4,000-5,000 parts per million methane recovered from the monitor wells over the pits. This was far below the level that RRC considered "explosive" (50,000 ppm) but it was believe to be "a greater concentration than Chevron anticipated measuring."[59] Data also showed 2 of 25 samples in excess of 1% TPH.[60] As Chevron periodically repeated its sampling procedures, a ritual ensued where RRC Site Remediation personnel would unlock the wells, monitor sampling activities along with plaintiffs' representatives, and request split samples when visual contamination was noted. Occasional problems were reported. For example, instrument problems at the laboratory used by RRC meant that certain samples had to be shipped to a Corpus Christi lab for analysis.[61] These samples were shipped to Corpus Christi, then to Louisiana, and then back to Corpus Christi.[62] RRC officials questioned the integrity of such samples, and were told that there would be no charge for them.[63] On another occasion, Chevron told the other parties that a sample was insufficient and wanted to re-sample. RRC representatives noticed visible contamination in the sample "and insisted and received split samples with residents."[64] Another problem concerned the effects of the wells themselves on samples and readings for methane. In mid-January 1996, field reports indicated that 3 of the 4 monitoring wells had partially filled with water. RRC officials indicated that they would ask Chevron about "what effect the water is having on the integrity of the testing."[65]

Methane testing ended with samples showing a maximum of 23,000 ppm methane at 5 feet, taken in an area where plaintiffs also encountered high levels. RRC personnel reported that surrounding tests indicated that such comparatively high concentrations were localized.[66] Elevated TPH was found at levels up to 5,990 parts per million (recall

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[57] Schaible, B. (1995). Electronic mail to COMW.DEESJ, RED.BeshearD, White.ScottB, OG.Tinteraj, OG.EatonT from Brian Schaible regarding Kennedy Heights, December 8, 1995, 12:08 p.m.
[58] Tintera, J. (1995). Electronic mail to RED.KellyM, RED.BeshearD, COMW.DEESJ, COM.HACHTMA, CARLICKD, WrotenberyL, EatonT, RossC, and IC.SCHAIBLEB from John J. Tintera regarding Kennedy Heights Update, December 15, 1995, 3:42 p.m.
[59] Tintera, J. (1996). Electronic mail to KH from John J. Tintera regarding Kennedy Heights Status Update, January 10, 1996, 9:13 a.m.
[60] Tintera, J. (1995). Electronic mail to KH from John J. Tintera regarding Upcoming Activities at Kennedy Heights, December 21, 1995, 11:52 a.m.
[61] Correa, A. (1996). Electronic mail to MIERTSCHINW and OG:RRC:RRC.OG (TINTERAJ) from Art Correa regarding KH Core Lab Samples – Reply – Reply – Reply, January 17, 1996, 8:55 a.m.
[62] Correa, A. (1996). Electronic mail to MIERTSCHINW and OG:RRC:RRC.OG:TINTERAJ from Art Correa regarding KH Core Lab Samples – Reply – Reply – Reply, January 17, 1996, 9:28 a.m.
[63] Ibid
[64] *Supra* note 48.
[65] Correa, A. (1996). Electronic mail to MIERTSCHINW and TINTERAJ from Art Correa regarding KH, January 24, 1996, 2:33 p.m.
[66] Tintera, J. (1996). Electronic mail to Kennedy Heights from John J. Tintera regarding Kennedy Heights Status Update, February 16, 1996, 8:35 a.m.

that preliminary data in two samples showed 10,000 ppm, or 1% TPH).[67] By the close of the investigation, the highest concentrations of TPH found by Chevron and RRC were 29,000 ppm and 24,000 ppm, respectively. Exploration Technologies, Inc. (a consulting firm hired by the plaintiffs) found levels as high as 32,060 ppm, in addition to "liquid product" (crude oil) at several locations.[68] It is difficult to draw conclusions directly from these numbers in terms of required regulatory action, particularly since the finding of liquid product was never officially verified by the RRC. For instance, a 1993 RRC rule provided for cleanup of "non-sensitive" areas when TPH levels exceeded 10,000 ppm.[69] Kennedy Heights was a sensitive area, implying that a lower threshold should be applied, albeit with adherence to specific risk-based decision making rules and procedures.[70] This was suggested by RRC District Manager Guy Grossman.[71] However, the rule (Statewide Rule 91) did not apply to spills that took place before November 1, 1993. For spills that did qualify for cleanup under the rule, RRC provided the following advice:

> Statewide Rule 91 distinguishes two categories of spills: (a) crude oil spills into non-sensitive areas; and (b) (i) hydrocarbon condensate spills and (ii) crude oil spills in sensitive areas. Rule 91 establishes clear goals for cleanup of crude oil spills in non-sensitive areas: immediate removal of all free oil, immediate vertical and horizontal delineation; specifying the "area of contamination" that must be delineated and disposed of or remediated, and specification of a final cleanup level of "1% by weight TPH." Rule 91 is less clear about the second category of spills. It stands to reason that hydrocarbon condensate spills and crude oil spills in sensitive areas, which pose greater risks, should at least follow standards established for the equally important but less threatening spills.[72]

Yet the same residential and industrial limits are given for TPH and BETX, a group of particularly toxic compounds associated with the processing of crude oil (benzene,

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[67] Tintera, J. (1996). Electronic mail to KH from John J. Tintera regarding Kennedy Heights Status Update, February 21, 1996, 2:48 p.m.

[68] A map of bore hole locations over the NE pit (which is bisected by Murr Way and Lockgate Lane) indicates that "liquid product," or crude oil, was found at 11302 Murr Way (at 8-10 feet), 11303 Murr Way (24 feet), 11315 Murr Way (10 and 26 feet), 11323 Murr Way (6-9 feet), 11322 Murr Way (5-8 feet), and 11323 Lockgate Lane (8-10 feet). Exploration Technologies (1995). Bore Hole Locations, Pit Number 1, Prepared for O'Quinn, Kerensky, McAninch & Laminak, August 15, 1995. During joint testing by RRC and Chevron, ETI workers asked a RRC official for permission to demonstrate where the liquid product was located, and were told that they lacked a work plan and had not submitted one in the requisite number of hours preceding their sampling activities on site. Interview with Exploration Technologies employee, December 17, 2002, via telephone. On December 13, 1995, RRC notes suggest this encounter: "Plaintiffs want to spl (core soils) w/in and adj. to Chevron monitoring well @ 11323 MW. We have mtg. – Chevron say core rig disturb their well. I say we are implement Chevron plan and want to maintain interpret of Chevron data – but the next round of assessment we may address this. Plaintiffs can core other places as long as they stay away from Chevron well." Railroad Commission of Texas (1995). Handwritten field notes for December 13, 1995.

[69] Statewide Rule 91 criteria are for crude oil spills in "non-sensitive" areas and include the following requirements: removal of all free oil immediately according to SWR 91 guidelines, horizontal and vertical delineation of all areas with more than 1% TPH (10,000 ppm), and proper reporting. A much more involved process for addressing sensitive areas has been developed by RRC, called the Risk-Based Decision Making (RBDM) program. Railroad Commission of Texas (2001). Guidelines for Spills, Releases, and Risk Based Decision Making for Oil Field Related Sites in Texas, June 21, 2001.

[70] *Supra* note 42.

[71] *Ibid*.

[72] *Supra* note 69.

ethylbenzene, toluene, and xylene). Another regulation governing sites similar to Kennedy Heights is Statewide Rule 8, also known as the "no pit rule." Rule 8 provides that "no person conducting activities subject to regulation by the Commission may cause or allow pollution of surface or subsurface water in the state." Before this rule was adopted in 1969, open pit storage of crude oil as well as the disposal of salt water and chemicals (including arsenic, barium, and cadmium) in open pits was standard practice. Plaintiffs argued that certain PAH's identified at Kennedy Heights were "hazardous substances" according to the Comprehensive Environmental Response, Compensation and Conservation and Recovery Act (CERCLA).[73] CERCLA does not impose any quantitative requirement when liability under the statute for release or threat of a release of a hazardous substance is determined.[74] The standards for encouraging agency action differed from the liability standards to which the parties would be held at trial.

In March 1996, RRC met with Chevron to discuss the second phase of the investigation. Chevron's plan included an evaluation of all three former pits with ten shallow groundwater monitoring wells, 33 hollow stem auger soil samples, and 24 cone penetration tests. The overall goal of this phase of the investigation was to "conduct a detailed toxicological risk assessment that will address the presence and distribution of contaminants, any exposure risk to residents, and surface or subsurface water pollution."[75] Sixty days of fieldwork were planned to gather data that would allow for a more comprehensive investigation of site contamination. RRC and Chevron worked out field operations so that representatives would be present for surveying, probing, and sampling. Again, RRC officials describe budgetary constraints that "will limit us to five samples."[76] The parties started with the NW pit for one week, and then moved into the neighborhood.

By this time, residents and a series of named defendants (including Chevron and Gulf companies and subsidiaries, developers, construction companies, investors, and investment trusts) had begun to prepare for trial. Consultants for both sides began testing for PAH's, some of which are known carcinogens.[77] Results were gathered by such firms

[73] Plaintiffs' Motion for Summary Judgment on the Scientific Significance of the Quantity, Scope, and Density of Contamination as it Relates to the Risk to Health for the Residents of Kennedy Heights Pursuant to the Court's March 5, 1997 Order, *Adams et al. v. Chevron U.S.A. et al.* (H-96-1462) (S.D. Tex, April 10, 1997).
[74] *Ibid*.
[75] *Supra* note 48.
[76] Correa, A. (1996). Electronic mail to MIERTSCHINW and TINTERAJ from Art Correa regarding Bids for KH Sampling, March 22, 1996, 10:41 a.m. ("As of 10:00 a.m. we have received three bids. The low bidder is a hub – Chemsolve from Austin. Bid is for $481 for either fluid or soil samples. The amount we are authorized will limit us to 5 samples. Bids have been signed and amounts double checked for accuracy. Any suggestions on what criteria we can document to award it as lowest and best bidder. Bidding is officially closed at 10:10 a.m. after checking fax maching and with SR & SRT personnel from any other bids.")
[77] The Agency for Toxic Substances and Disease Registry explains that "The Department of Health and Human Services has determined that some PAHs may reasonably be expected to be carcinogens. Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin

and individuals as Exploration Technologies (ETI)[78], Research Statistics, Inc.[79], and Dr. Jack Matson.[80] Health effect and symptom surveys were conducted by Dr. Dick Clapp, an epidemiologist from Boston University[81] and researchers from the University of Texas at Galveston.[82] Residents' representatives began to piece together a story for trial: during periods of depressurization, caused when breaks in the pipes or repairs occurred, contaminants entered the water pipes, located at a depth below the surface where some of the highest levels of contaminants were found. Water main breaks occurred within Kennedy Heights at a rate of 20-30 breaks per mile per year.[83] The contaminants included several known animal carcinogens, including a number of aromatic hydrocarbon compounds. One of the areas of the body affected by exposure to polycyclic aromatic

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(skin cancer)." Agency for Toxic Substances and Disease Registry (1996). ToxFAQs for Polycyclic Aromatic Hydrocarbons, http://www.atsdr.cdc.gov/tfacts69.htm, accessed April 9, 2002.

[78] Preliminary results showed that samples from Kennedy Heights matched with samples of Pierce Junction's oil. ETI also produced a series of contour maps detailing estimates for methane, TPH, and other chemical concentrations. TPH was found as high as 9,925 ppm at 4-6 feet on Murr Way. Exploration Technologies, Inc. (1996). Preliminary Environmental Site Assessment, Kennedy Heights Subdivision, Houston, Texas. Prepared for O'Quinn, Kerensky, McAninch, and Laminack, Houston, Texas, January 29, 1996.

[79] Concluded that "The residents of Kennedy Heights, present and former, have not been exposed, if at all, to concentrations of polycylic aromatic hydrocarbons sufficient to produce any diseases or dysfunctions, acute or chronic, including cancer of any form." Pier, S. (1996). Toxicological Report prepared for Clade R. Treece, Esq., Gardere Wynne Sewell & Riggs, L.L.P. by Stanley M. Pier, Ph.D., Research Statistics, Inc., October 28, 1996.

[80] Found that "crude oil constituents from tank bottoms entering the drinking water system are distributed to homes in a short period of time." The primary mechanism for the transport of hydrocarbons was "entry from suspension in water surrounding a main break." Also found that methane had evolved from the conversion of tank bottom hydrocarbons and represented "an explosive threat to residents within the Pit Number One area (Northeast Pit)." Matson, J.V. (1996). Expert Report: Environmental Conditions at Kennedy Heights Subdivision, Houston, Texas. Prepared for O'Quinn, Kerensky, MacAninch, and Laminack by Jack V. Matson, Ph.D., P.E., Consulting Environmental Engineer, October 1, 1996.

[81] Richard Clapp, MPH, D.Sc., with Boston University, reviewed a report by Meta Environmental, Inc. and testing done in September, 1996, which found several substances which are animal carcinogens "and therefore may be expected to cause cancer and other toxic effects in exposed humans." He also calculated prevalence rates for systemic lupus erythematosus (SLE), and compared his results with estimates of prevalence in whites and African-Americans in the U.S. National prevalence rates ranged from about 10-50 cases per 100,000. His estimate for the combined (current and former) population of homes in Kennedy Heights to be 2,435, of which 10 cases of SLE were reported. The prevalence of SLE in the combined population was estimated at 411 per 100,000, or between 4.9-8.2 times the upper end of the range of prevalence of SLE in the U.S. population. Clapp concluded that since the lower end of the confidence interval for his estimate was still more than three times higher than the upper range for the U.S. population, the results were not likely to be due to chance fluctuation. Clapp, R. (1996). Repot of Richard W. Clapp. October 1, 1996.

[82] A symptom survey was completed by 72 residents. Within this group there were ten reported cases of cancer as well as eleven reported cases of benign tumors. There were 26 reported problems with pregnancies (out of 90 experienced by the group). The group also reported 350 symptoms of central nervous system problems as well as 108 immune system-related ailments or conditions. The toxicologist responsible for the survey stated that "PAH's and naphthlamines are known to cause serious health effects. When these effects are exhibited by the plaintiffs, it is my opinion, to a reasonable scientific probability, that these chemicals caused or significantly contributed to the adverse health effects suffered by the above trial plaintiffs." Legator, M. (1996). Addendum to Symptom Survey. Prepared by Marvin S. Legator, Ph.D., University of Texas Medical Branch at Galveston.

[83] *Supra* note 80.

hydrocarbons is the immune system.[84] Lupus, a disease in which the immune system loses its ability to tell the difference between foreign substances and its own cells and tissues, was prevalent in Kennedy Heights at a rate that was several times the national rate.[85] Other diseases linked to some of the known or suspected carcinogens in the soil were also prevalent in the subdivision. Some of the diseases, including lupus, were not known to be in the family histories of those who suffered from them.

In response to concerns about drinking water, Chevron's Comprehensive Work Plan was drafted to include a proposal to collect samples from the outside hose bibs of 13 selected homes "as soon as reasonably possible, but no later than 24 hours after a water line break has been repaired in the Kennedy Heights subdivision."[86] The company also offered free drinking water testing to residents whose homes were located in the general area of the NE pit. Plaintiffs were opposed to the sampling program, claiming that it was "unlikely to detect contamination at any home not affected by a specific pipeline break."[87] More importantly, it would have "limited utility in determining how much contaminated water has entered homes in Kennedy Heights during the last twenty-five years."[88] As preliminary fieldwork for the Work Plan commenced, relations among the parties soured. Residents picketed some of the testing activities, claiming that RRC was responding at a slower pace to their concerns than to problems with a former crude oil storage site near the Memorial Glen subdivision south of Humble, Texas.[89] The Houston District Office of RRC was forwarded approximately 80 letters from residents, originally mailed to the

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[84] *Supra* note 81.
[85] *Ibid*.
[86] Flour Daniel GTI (1996). Comprehensive Work Plan for Kennedy Heights Subdivision, Houston, Texas, Third Draft, prepared for Chevron U.S.A. Production Company, October 18, 1996.
[87] Bell, A.E. (1996). Letter to Terri Eaton, Assistant Director, Environmental Section, Railroad Commission of Texas, Office of General Counsel from Allen Eli Bell, Bernsen, Jamail and Goodson, L.L.P., June 4, 1996.
[88] *Ibid*.
[89] On at least two occasions, RRC officials assembled data regarding site investigation on other pits within their jurisdiction. These included Memorial Glenn (the Landslide site), which was adjacent to a subdivision ("Texaco had crude oil storage pits dating from the 1920's with liquid crude exposed to the surface. No residences were involved. Remediation was a stabilization program where the pit contents were solidified on site"); Wilson Court, in Humble a few miles south of Landslide ("Numerous large crude oil storage pits dating from the 1920's were partially backfilled on a 104 acre site. Liquid hydrocarbons were seeping to the ground surface. Current pilot program is a bioremediation/landfarm effort on 19 of the 104 acres"); and the Sun site ("four large and several smaller crude oil storage pits at the site again dating from the 1920's, a few miles south of Wilson Court. The pits were open and exposed to the surface. A bioremediation project is currently being conducted for closure"). Tintera, J. (1996). Electronic mail to IC.SCHAIBLEB from John J. Tintera regarding Remediation project info – Reply, April 4, 1996 10:19 a.m. This information was gathered in response to requests from the media as well as State Senator Rodney Ellis' office. Ellis' Chief of Staff was most concerned about the "Texaco Humble Pits" and whether they were similar to the Kennedy Heights site, as well as the length of time between discovery and site closure. In reply, RRC maintained that "The age and use of the Humble pits are similar to KH, however many of the Humble pits were open at the surface and had not been backfilled. Residences were adjacent, not within, the pit boundaries. Elevated methane concentrations were not reported. Similar investigation activities were required, which included the installation of water monitor wells and extensive soil sampling." Tintera, J. (1996). Electronic mail to IC.LawsonS from John J. Tintera regarding Sen. Ellis Kennedy Heights Info Request (and attached answers to information request by Chief of Staff William Paul Thomas), March 27, 1996, 10:50 a.m.

TNRCC, requesting cleanup of contamination at Kennedy Heights.[90] Fifty residents attended a technical meeting regarding Chevron's Work Plan, again questioning the risk assessment and its ability to appropriately characterize sporadic contamination entering residential lines after water main breaks.[91] At a pre-hearing conference in Houston, residents' attorneys claimed that the hearing process lacked clear ground rules, standards, and a clear burden of proof.[92] The residents withdrew from the hearing, but implored RRC to continue its efforts, citing "ample technical data available to support enforceable remediation measures."[93] Residents would rely predominantly on the courts, under the belief that a "federal judge will move faster than RRC."[94]

Upon conclusion of sampling over each pit by various consultants, RRC prepared summaries of contamination that was found. Tables 3-5 provide an overview of the highest concentration of various types of compounds, as summarized by RRC.

[90] Tintera, J. (1996). Electronic mail to COMW.OG_GREENSHEET from John J. Tintera regarding Kennedy Heights Correspondence, May 9, 1996, 2:47 p.m.
[91] Tintera, J. (1996). Electronic mail to COMW.OG_GREENSHEET from John J. Tintera regarding Kennedy Heights, May 23, 1996, 2:41 p.m.
[92] Tintera, J. (1996). Electronic mail to EatonT, LG.JohnsonB, LG.FowlerL, SchieckD, Wrotenb… from John J. Tintera regarding Kennedy Heights Pre-Hearing Conference, November 17, 1996, 12:45 p.m.
[93] *Ibid*.
[94] *Ibid*.

Table 3. Highest Concentration Found as Proportion of TNRCC Regulatory Limit, NE Pit (ppm).

	Chevron	RRC	ETI	City	PSI
TPH at Surface	1,453	800	7,797	590	-
TPH	29,000*	24,000*	9,720	-	-
VOC	43.49*/10.7 (Methylene Chloride)	-	.212*/1.33 (Benzene) 25/1.0 (Toluene)	-	-
S-VOC	39.18/45.7 (Bis 2-ethylhexyl phthalate)	-	33*/.00608 (Bis 2-ethylhexyl)	-	2.649*/ .00608 (Bis 2-ethylhexyl)
Total Metal	11.7*/.366 (Arsenic)	-	2.5*/.366 (Arsenic)	-	.450*/.366 (Arsenic)
SPLP VOC	2.99*/.005 (Methylene Chloride)	.009*/.005 (1,2 dichloroethane) .037/.005 (Methyl Chloride)	-	-	-
SPLP S-VOC	.021*/.006 (Bis 2-ethylhexyl phthalate)	-	-	-	-
SPLP Metal	.24/2.0 (Barium)	.004*/.002 (Mercury) 1.7/2.0 (Barium) 2351*/300 (Sulfates)	-	-	-
DW VOC, S-VOC, Metal	-	-	-	-	.016/.1 (Chloroform), .012*/. 00608 (Bis 2-ethylhexyl), .001/.05 (Arsenic)

TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compound
S-VOC = Total Volatile Organic Compounds
SPLP = Synthetic Precipitate Leaching Procedure, an analytic method to determine the mobility of compounds in soil
DW = Drinking Water
- = no hit or test for this compound
* = above TNRCC regulatory limits (number below / represents limit); numbers for TPH with a * are above RRC guidelines for non-sensitive areas; at the time, sensitive areas were assessed on a case-by-case basis

Table 4. Highest Concentration Found as Proportion of TNRCC Regulatory Limit, NW Pit (ppm).

	Chevron	RRC	ETI
TPH at Surface	3,674	1,100	636
TPH	23,450*	18,000*	32,060*
VOC	36.63*/10.7 (Methylene Chloride)	-	-
S-VOC	19.39/45.7 (Bis 2-ethylhexyl phthalate)	-	33*/.00608 (Bis 2-ethylhexyl)
Total Metal	11.4*/.366 (Arsenic)	-	2.5*/.366 (Arsenic)
SPLP VOC	4.07*/.005 (Methylene Chloride)	-	-
SPLP S-VOC	.0068*/.006 (Bis 2-ethylhexyl phthalate)	-	-
TCLP Metal	-	1.2/2 (Barium) 303*/300 (Sulfates)	

TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compound
S-VOC = Total Volatile Organic Compounds
SPLP = Synthetic Precipitate Leaching Procedure, an analytic method to determine the mobility of compounds in soil
TCLP = Toxicity Characteristic Leaching Procedure, an analytic method to determine metal mobility
- = no hits or test for this compound from samples taken
* = above TNRCC regulatory limits (number below / represents limit); numbers for TPH with a * are above RRC guidelines for non-sensitive areas; at the time, sensitive areas were assessed on a case-by-case basis

Table 5. Highest Concentration Found as Proportion of TNRCC Regulatory Limit, SE Pit (ppm).

	Chevron	RRC	ETI
TPH at Surface	24	200	31
TPH value	31	200	8
VOC	5.99/10.7 (Methylene Chloride)	-	-
S-VOC	6.99/45.7 (Bis 2-ethylhexyl phthalate)	-	-
Total Metal	12.1*/.366 (arsenic)	-	-
SPLP VOC	4.14*/.005 (Methylene Chloride)	-	-
SPLP S-VOC	.01198*/.006 (Bis 2-ethylhexyl phthalate)	-	-
TCLP Metal	-	2678*/300 (Sulfates) 305*/300 (Chlorides)	-

TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compound
S-VOC = Total Volatile Organic Compounds
SPLP = Synthetic Precipitate Leaching Procedure, an analytic method to determine the mobility of compounds in soil
TCLP = Toxicity Characteristic Leaching Procedure, an analytic method to determine metal mobility
- = no hits or test for this compound from samples taken
* = above TNRCC regulatory limits (number below / represents limit)

While certain compounds were found at levels exceeding regulatory standards, RRC determined, through analysis of a risk assessment performed by Chevron, that the levels of contamination did not pose a sufficient threat to human health to warrant remedial action. Prior to completion of Chevron's Work Plan, the RRC responded to concerns

expressed by State Senator Rodney Ellis regarding the anticipated risk assessment. The Assistant Director of the Environmental Section of the RRC characterized risk assessment as follows:

> No single risk assessment model will account for site-specific variables in all cases, including those at Kennedy Heights. However, risk assessment techniques are designed to be adjusted to accommodate site-specific variables. Commission staff has experience evaluating site-specific risk assessments, including assessments of risk to nearby residents from surface and subsurface contaminants. It a thorough risk assessment of the residual contamination at Kennedy Heights indicates that the residents are or may be exposed to constituents of concern at unacceptable levels, appropriate remedial measures will be required.[95]

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RRC's evaluation of Chevron's risk assessment led them to conclude that residents were not exposed to unacceptable levels of hydrocarbons. Residents were left to seek relief through the courts.

The Dispute

The procedural history of the lawsuit began when the original suit, *John R. Simmons et al. v. Chevron U.S.A.*, was filed in state district court on March 24, 1995.[96] In August 1995, plaintiffs' property claims were bifurcated from the personal injury case and set for trial on January 8, 1996. Judge William Bell recused himself from the case, which was reassigned to Judge Tony Lindsay, who was disqualified for ownership of stock in Chevron. The case was transferred to Judge Lamar McCorkle. At that point, the state court cause of action was removed to federal court (under Judge Sim Lake) and eventually consolidated into *Adams et al. v. Chevron et al.* (under Judge Kenneth Hoyt).[97]

Plaintiffs in the *Adams* case alleged that the three pits upon which the Kennedy Heights Subdivision had been built were utilized, stored, removed, and filled in an unreasonably dangerous and unlawful manner.[98] They claimed that chemicals from these operations had volatized and remained in the soils and groundwater in toxic and explosive quantities, exceeding federal and state regulatory limits. Further, it was believed that "these chemicals and other unknown chemicals have infiltrated the water supply and may infiltrate the water system servicing the residents in and around the site."[99] It was argued that defendants failed to disclose or falsely represented the historical uses of the site and presence of residual contamination in order to obtain government financing that would facilitate the purchase of the property from Chevron.[100] The manner in which defendants

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[95] Eaton, T.K. (1996). Letter to William-Paul Thomas, Chief of Staff, Office of Senator Rodney Ellis from Terri K. Eaton, Assistant Director, Environmental Section, Railroad Commission of Texas, Office of General Counsel, June 7, 1996.
[96] Plaintiffs' Sumary of the Case, *Adams et al. v. Chevron U.S.A., Inc. et al.*, 96-CV-1462 (S.D. Tex. September 10, 1997).
[97] Order Granting Motion to Consolidate Cases, *Adams et al. v. Chevron U.S.A., Inc. et al.*, 96-CV-1462 (S.D. Tex. August 6, 1996).
[98] Plaintiffs' Original Complaint, *Adams et al. v. Chevron U.S.A., Inc. et al.*, #96-CV-1462 (S.D. Tex. May 6, 1996).
[99] *Ibid*, at 5.
[100] Plaintiffs' Second Amended Complaint, *Adams et al. v. Chevron U.S.A., Inc. et al.*, #96-CV-146 (S.D. Tex. October 1, 1996).

could be held negligent was outlined, in addition to allegations of nuisance, trespass, toxic assault and battery, fraud, misrepresentation, concealment, failure to disclose material facts, conspiracy, and other claims. Residents sought damages for physical, mental, medical, property, and punitive damages, as well as attorneys' fees, expert fees, and other costs. The primary defendant, Chevron, argued that no liability existed for any of the alleged damages, many of which they claimed were speculative, due to risks assumed by plaintiffs, related to conditions that Chevron did not have control over, barred under the statute of limitations, and barred because they were not addressed by plaintiffs in a manner consistent with the National Contingency Plan for dealing with contaminated sites.[101]

The complexity and cost of preparing for the case grew seemingly exponentially as routes of exposure, computer simulations, a variety of sampling protocols, and lab tests were each pursued. Analysis of various aspects of the site reached a fevered pitch by October 1, 1996, when a series of consultants' reports were made available to either the plaintiffs or Chevron, covering everything from human factors[102] to historical aerial photograph[103] to sociological[104] to forensic architectural[105] to toxicological[106] to fate and transport to property value[107] analysis. Chevron continued to meet with the Railroad Commission,

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[101] Affirmative Defenses and Answer to the First Amended Complaint, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (N.D. Tex. July 12, 1996).

[102] For example, a human factors psychologist argued that when addressing residents, "Chevron failed to take into account important characteristics of the population – their beliefs, history, and lack of sophistication with regard to chemical dangers and routes of exposure. In assuring the residents that there were no toxins buried on the site, they were using language to attempt to deceive the scientifically naïve residents of Kennedy Heights (toxin is a specific term meaning a poisonous animal or plant substance)." She further characterized Chevron's use of the media as "intended to increase the residents' feelings of helplessness and to influence public opinion." Laux, L. (1996). Letter to Carl Shaw, O'Quinn, Kerensky, McAninch and Laminack from Lila F. Laux, Ph.D., Human Factors Consulting, September 23, 1996.

[103] For instance, the plaintiffs asked Robert Maggio to review aerial photographs of the Kennedy Heights area from 1930-1996. Maggio, R.C. (1996). Expert Report of Dr. Robert C. Maggio in Case No. 95-14770, *John R. Simmons et al. v. Chevron U.S.A., Inc. et al.* October 1, 1996.

[104] Sociologist Steven Couch referred to the belief among Kennedy Heights residents that there is environmental contamination as a "culture of distress" that included severe uncertainty about the extent and scope of contamination, powerlessness, pervasive fear, constant vigilance, stigma, social isolation, disillusionment, anomia (the belief that following societal rules will not lead to the ends people wish to achieve), alienation, anger, blame, mistrust, social conflict, preoccupation with contamination-related problems, changes in the meaning of "home," and stress resulting from "the endless nature of the problem." Couch, S.R. (1996). Letter to Dr. John P. Wilson, Department of Psychology, Cleveland State University from Stephen R. Couch, Ph.D.

[105] An engineering report by Peverley Engineering Inc. found that a number of homes on Murr Way required foundation repairs. Peverley, R.W. (1996). Forensic Examination of the Structural Foundations of Selected Residential Buildings Which are a Part of the Kennedy Heights subdivision, Houston, TX. Pevereley Engineering Inc., September 26, 1996.

[106] For example, Dr. Richard Irons with the University of Colorado reviewed the environmental testing data gathered prior to October 30, 1996. He said that samples containing detectable amounts of flourene, chrysene, or phenanthrene did not represent PAH's that are among the 15 for which sufficient evidence of carcinogenicity exists in animals. Irons, R. (1996). Letter to Robert Scott, Esq., Adams, Scott, and Bickley, L.L.P. from Richard Irons, Ph.D., Director, University of Colorado Health Sciences Center, October 30, 1996.

[107] For example, one report compared survey results from Kennedy Heights and control areas regarding attitudes about property values and residents' desire to move. The survey, taken via telephone in

which in Texas had nearly sole jurisdiction over matters of petroleum production, transport and related hazardous waste sites, to develop and execute their comprehensive work plan.

As with many mass torts cases, community representation became a source of contention. Attorneys represented groups ranging from between a handful of claimants and several thousand residents, some who had not lived in Kennedy Heights for a number of years. Some of the initial motions filed in this case dealt with how such a case, where exposure, physical manifestations of ailments, and corresponding damages were uncertain and unevenly distributed, could be fairly tried. On December 19, 1996, an order establishing trial plans and resolving some of these dilemmas was issued.[108] Thirty bellwether plaintiffs were chosen, 15 by each side, and the case proceeded with a focus on individual claims and the issue of the existence of liability on the part of Chevron for pollutants that gave rise to claims under CERCLA, RCRA, the Safe Drinking Water Act, the Clean Water Act, the Oil Pollution Act, the Fair Housing Act, and the Civil Rights Act of 1983. Defendants argued that such a selection process would not allow for the trial to consider a representative group of plaintiffs, as they were not similarly situated.[109] Further, defendants claimed that the solution of a bellwether trial might place intense pressure on them to settle if the plaintiffs experienced illnesses and suffered injuries that were not representative of the now more than 3,000 residents involved.[110] The defendants proposed stratified random sampling as an alternative means of selecting bellwether claimants. Due to the extensive history of the case, Chevron's previous lack of attempts to modify the proposed trial plan, and the court's discretion in choosing how to bifurcate or trifurcate liability, general causation, and individual causation, defendants' writ of mandamus was denied and the trial proceeded.[111] However, the 5th Circuit prohibited the trial judge from using the results of a trial of the 30 plaintiffs to establish issue or claim preclusion in the case.[112]

As the trial advanced through 31 days of testimony by plaintiffs' witnesses and cross-examination by attorneys predominantly for Chevron, several facts of the case became clear: (a) the residents of Kennedy Heights had not been aware of the former use of the

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November and December 1995, suggested that few residents rated their environmental quality as "low" (11.8%). It also analyzed price trends for housing at various distances from the storage tanks. The results did not show that homes closest to the tank were selling at a discount to homes more distant from the pits. However, significant news coverage of the story occurred in February 1994 (results of tests of residents' contractor mentioned and the Health Department contended that petroleum-related chemical concentrations were not of concern) and did not reappear until April, 1995 (when it was ruled that continued digging in Kennedy Heights created a substantial risk). Chalmers, J.A. (1996). Expert Report on Kennedy Heights Property Value Analysis. Coopers & Lybrand, L.L.P., October 30, 1996.

[108] Order Granting Motion to Determine Trial Plan, *Adams et al. v. Chevron U.S.A., Inc. et al.* (96-CV-1462) (S.D. Tex. December 19, 1996).

[109] Supplemental Brief by Chevron USA Inc., Gulf Oil Corporation, Gulf Refining Co., Gulf Pipeline Co., Gulf Production Co. in support of its recommendation on the trial of this case, and supplemental response to Plaintiffs' statement of case and request for ratification of Bellwethers, *Adams et al. v. Chevron U.S.A., Inc. et al.* (96-CV-1462) (S.D. Tex. November 1, 1996); Petition for Writ of Mandamus, *Adams et al. v. Chevron U.S.A., Inc. et al.* (96-CV-1462) (S.D. Tex. December 19, 1996).

[110] *Ibid*.

[111] *Supra* note 108.

[112] 109 F.3d 1016, 1017 (5th Cir. Mar. 1997).

site, (b) residual contamination from a prior use of the site for crude oil storage was present in the soil, (c) the presence of certain substances in the soil could be linked to the Pierce Junction well owned by Gulf Oil (which transferred liability to Chevron), and (d) there was a cluster of disease in the subdivision, particularly in the vicinity of the NE pit (although there were strong differences over whether this cluster had anything to do with environmental contamination). While these facts were relatively easy to demonstrate,

> [C]ausation was going to be a difficult issue. Essentially, you may have a toxin, and it may have a vehicle by which it could reach the victims but the measuring of what level of intake would be required to cause certain manifested injuries, the science was not as aggressive as the accusations, and so I felt that that was going to be difficult. We believed that it would be easy to show the presence of the toxins. We believed it would be easy to show how the toxins were being delivered to the victims. Quantifying the delivery system and qualifying the amounts of the toxins in a diluted substance were going to be incredibly difficult because the science was just not established with the requisite level of certitude…[I]t's the tried and true plan of strategy of starting with damages and using the Cartesian formula that there is a cause and effect. We knew that we had an effect. We had the injury, and we had the search for the cause, and when you have cumulative effects that have a certain pattern, we use science as probabilities that if you have a common occurrence that is the effect, there should be in all reasonable probability a common cause, and so we used the strategy of going for the effect first, because that we could prove with certainty, and then the causal link we thought would necessarily follow if the Cartesian formula was correct. The mind would beg for a cause if you could establish the existence of the effect…Our victims were the predominant vessels of the effects. They had the lupus that had been fully diagnosed by scientists who had no prejudice one way or the other in the case. And their proximity to each other, those were easily establishable facts. They were close to each other, they all had lupus-like and lupus diseases.[113]

When the case shifted from the presence of certain effects, such as disease rates, to the other end of the Cartesian formula, problems arose. Doubt was cast particularly on the plaintiffs' witnesses charged with generating a computer model and theorizing how toxicants were moved from waterlines to residents' sinks and bathtubs. For much of this work, plaintiffs retained Charles Howard & Associates. Howard was a consultant to water, sewerage, and power utilities, as well as local, state, and federal governments across North America, in the development and use of computer techniques for water management. After taking field measurements of water pressure at various points across the distribution system in Kennedy Heights, Howard used EPANET, a computerized water distribution system simulation developed by the Environmental Protection Agency, to model the fate and transport of contaminants to plaintiffs' homes.[114] Based on the introduction of 1 g/m^2 of a contaminant to a hypothetical pipe break along the network, EPANET was modeled to provide estimates of contaminant concentrations at certain locations, given in maximum levels within each hour in mg/l over a 24-hour period. Assuming that contaminants entered the system during water main repairs, Howard modeled concentrations at various points along water pipes and at certain bellwether homes after a hypothetical repair at 11322 Murr Way or 11322 Lockgate Lane.[115] His

[113] Interview with Attorney for Plaintiffs in *Adams et al. v. Chevron USA et al.,* April 18, 2002, in Houston.
[114] Howard, C.D. (1996). Letter to Carl D. Shaw, O'Quinn, Kerensky, McAninch & Laminack from Charles D. Howard, Charles Howard & Associates, Ltd., September 30, 1996.
[115] Plaintiffs took water samples and samples of "oil floating on the surface of the water and entering a pipe during a pipe repair" after a pipe break at 11326 Lockgate Lane in September 1996. They found PAH

findings suggested that between .027 and 5.082 mg/L of contaminant would be found in pipe 4243, which delivered water to seven of the bellwether plaintiffs' homes, over the course of a 24 hour period following introduction of the contaminant into a pipe at 11322 Murr Way. Chevron questioned many of the assumptions underlying the model itself as well as Howard's choice of inputs into the model.[116]

Despite numerous challenges against many of their expert witnesses, plaintiffs were able to present and enter into evidence most of the data that they had gathered. However, as they neared completion of their presentation of the case, an unexpected series of events unfolded. First, the fifth judge assigned to the case, Kenneth Hoyt, recused himself after weathering a series of accusations of bias from Chevron and (according to plaintiffs' attorneys) other outside pressures. Plaintiffs accused Chevron of "forum shopping" and cited evidence of defendants' efforts to avoid compliance with the court's discovery orders.[117] Chevron maintained that Hoyt had shown favoritism for the plaintiffs and made biased comments, primarily during bench conferences.[118] The Fifth Circuit Court of Appeals was not entirely persuaded of the existence of prejudice.[119] However, "in the interest of justice," Hoyt disqualified himself and declared a mistrial in August 1997.[120]

Dispute Resolution

The final judge to be assigned to the case, David Hittner, focused hearings on several issues following the mistrial[121]:

1. How best to proceed with a trial plan:
    a. Make use of a similar bellwether claimant selection process to what had been tried to date (plaintiffs preferred that a trial proceed for the 29 previous bellwethers or a representative subset, with the court

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concentrations of 2.4 ppm in the water and 7,826 ppm in the oil. Plaintiffs' Summary of the Case, *Adams et al. v. Chevron U.S.A., Inc. et al.*, H-96-1462 (S.D. Tex. September 10, 1997).

[116] Defendants claimed that the model was not scientifically valid because (a) it was not initially designed to model oil contamination but was created for the modeling of soluble substances such as chlorine, (b) was not calibrated in response to field measurements, (c) eliminated portions of the water distribution system to increase amounts of the contamination to certain homes, (d) was run twice and then totaled, and (e) resulted in more PAHs at certain homes than had been entered under the assumed water line break. Defendants further disagreed with the model's assumptions regarding the amount of contaminated water to enter the pipes and the amount to stick to pipe surfaces and remain after post-repair flushing of the system. Summary of the Case Submitted by Defendants, *Adams et al. v. Chevron U.S.A., Inc. et al.*, H-96-1462 (S.D. Tex. September 10, 1997).

[117] Platintiffs' Response to Chevron Defendants' Motion for Disqualification, *Adams et al. v. Chevron U.S.A., Inc. et al.*, H-96-1462 (S.D. Tex. July 25, 1997).

[118] For instance, Judge Hoyt discounted a pamphlet presented by Chevron attorneys that stated that blacks had a higher incidence of lupus than whites, because "white people write it." Tedford, D. (1997). Judge Hoyt recuses self from trial: Kennedy Heights case will have to be retried. *Houston Chronicle*, August 22, 1997, p. A-1.

[119] *In re Chevron U.S.A., Inc.*, Cause No. 97-20612 (5th Cir. August 19, 1997).

[120] Order, *Adams et al. v. Chevron U.S.A., Inc. et al.*, H-96-1462 (S.D. Tex. August 21, 1997).

[121] Hearing before the Honorable David Hittner, *Adams et al. v. Chevron U.S.A., Inc. et al.*, H-96-1462 (S.D. Tex. September 18, 1997).

maintaining previous rulings regarding admissibility of evidence under the *Daubert* doctrine[122]),

b. Apply defendants' previously proposed selection methodology for a bellwether trial, or

c. "Try the site," by determining whether harmful substances that were the responsibility of Gulf Oil were found in Kennedy Heights and whether those substances could cause diseases that were a part of the lawsuit (defendants' preferred approach);

2. Which hearings and motions for summary judgment should be held and ruled on, particularly relating to the admissibility of certain medical and scientific evidence gathered by plaintiffs (defendants argued that much of the evidence regarding drinking water contamination was inadmissible under the doctrine set forth in the case of *Daubert* and cited approvingly in other cases, including a recent 5th Circuit ruling[123]);
3. Which issues would be heard first should the case be retried; and
4. Whether there was interest in exploring settlement possibilities in the case.

Defendants initially expressed doubts about the probability of settlement, "if a settlement implicates or necessarily implicates the personal injury medical claims of the plaintiffs." Chevron was of the opinion that it would succeed in its legal position against plaintiffs' medical case either on its *Daubert* motions, at trial, or in the 5th Circuit. They were thus amenable to segregating the medical case from the property damage claims of plaintiffs for rulings by the court. They did not approve of the consideration of medical claims in mediation.

> Our position is that if we went into a mediation, no matter how good the mediator, no matter what the good faith of the parties, if they're expecting compensation for the medical part of their case and we are not intending to pay anything on the medical part of their case, that a mediation would be fruitless.[124]

Nevertheless, both sides agreed to three names of mediators before the original hearing by Judge Hittner in September 1997. Plaintiffs' attorneys listed M.A. "Mickey" Mills first on their list and Chevron found the choice acceptable. John O'Quinn described his reasons for wanting to explore mediation:

> I have got clear proof that your company sold what I call dirty land; and I have got clear evidence from competent real estate experts that that has affected the value of our land, whether it caused any disease or not. There is a stigma value associated with having your house built on top of an old toxic waste dump. I said, surely you can come and settle that part of the case. Why can't we do that? Because one of the big points that has been driving my decision making is, I feel out of concern for my clients, I want them to have an economic way to get off of this land, to get away from it. I want them to have some money where they can move on with their lives. If they could get their property damage, perhaps that could be done…So, here's my point: I don't see any

[122] The case of *Daubert et al. v. Merrell Dow Pharmaceuticals, Inc.* established the standard whereby scientific evidence in torts claims is admissible. Evidence is admissible only if the principle upon which it is based is "sufficiently established to have general acceptance in the field to which it belongs." 509 U.S. 579, 113 S.Ct. 2786.

[123] *Allen v. Pennsylvania Engineering Corp.*, 102 F.3d 194 (5th Cir. 1996).

[124] *Supra* note 121, p. 61.

> reason why we can't at least in good faith mediate the property damage. I mean, [Chevron] doesn't have a *Daubert* hearing, as I see it, on the property damage.[125]

Other matters remained unresolved. For instance, plaintiffs were concerned about how mediation would affect their claims under CERCLA, which allows for recovery of money spent investigating the extent of site contamination. In addition, under the Resource Conservation and Recovery Act (RCRA), plaintiffs claimed a right to require defendants to remediate the site, a process which their lead environmental engineering expert estimated at between 30 and 42 million dollars. O'Quinn felt that recovery of certain expenditures as well as punitive damages (should they be linked to a property damage claim) could be explored and potentially resolved through mediation. Defendants countered that they would prefer not to discuss all of the above issues, only to have to subsequently try the personal injury claims. While the issue was left to the judge to determine, plaintiffs urged the court to "see if we can start a mediation in the near future," while defense attorneys noted that "it would be more productive to undertake serious settlement negotiations, if they're possible, after we have had a hearing on the motions we have been discussing." The court ordered the case to mediation on September 22, 1997, noting that "Mr. Mills was the mediator agreed to by all parties, in the event the Court elected to forward this case for mediation."[126] Further, it was ordered that approximately 1,000 plaintiffs who had been previously severed from the case be rejoined with the other O'Quinn plaintiffs.[127] At around the same time, a matter in state court that focused primarily on property value diminution was ordered into the same mediation.[128] Several small, independent groups of plaintiffs were also folded into the talks. The court's objective of applying whatever was to be worked out in mediation to all claimants was potentially met.

Chevron asked the court to allow it to file additional motions for summary judgment, particularly regarding plaintiffs' medical testimony and the admissibility of evidence regarding water contamination. As the mediation progressed, Judge Hittner gave a clearer picture of what a trial would look like should mediation prove unable to yield a settlement. First, Hittner would hold *Daubert* hearings regarding water contamination *and* property value claims. He further planned to convene oral hearings for a number of defendants' motions to exclude testimony.[129] Knowledge of recent court rulings that referenced and reinforced the doctrine established in *Daubert* started to shape certain plaintiffs' attorneys' views of their changes of success should the case be retried.

Mills began to carry out his tasks as mediator in the case, and was later appointed "special master" under rule 53(b) of the Federal Rules of Procedure. He was asked to:

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[125] *Supra* note 121, p. 62.
[126] Order, *Adams et al. v. Chevron, U.S.A., Inc.*, H-96-1462 (S.D. Tex. September 22, 1997).
[127] *Ibid*.
[128] Interview with Plaintiffs' Attorney, December 19, 2002, via telephone.
[129] Transcript of Hearing before the Honorable David Hittner, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. February 19, 1998).

> Make recommendations to the Court to define the final/complete plaintiff group in this case; and
>
> Report to the Court and the parties his determination of an allocation of any of the settlement funds among the final/complete plaintiffs in the Kennedy Heights litigation.[130]

Thus commenced the settlement negotiations that plaintiffs had long prepared for (attorney notes suggest preparation of a settlement matrix linking plaintiffs to exposure years and forecasting bellwether claims settled in a certain dollar value range). The special master described "four phases" to settlement of the case on June 2, 1998, after having met with most or all of O'Quinn's clients (roughly 1,700 people):

> The **first phase**, which I have explained extensively to the various clients and to the plaintiff attorneys, would be what I call a settlement model. The settlement model treats all of the parties fairly, even though each of the parties may get a different amount of the settlement. I should have the settlement model done within the next week, maybe as late as 10 days, to present to the plaintiffs and their counsel. Once the settlement model has been agreed to by the plaintiff attorney, because it's essentially for their allocation of whatever amount the case settles for, **I would then** be involved in negotiating an actual settlement agreement. The settlement agreement will set out all of the detailed terms of the settlement. For example, the amount of plaintiffs that have to agree to the settlement and any other particular terms that may be unique to the settlement. Once the settlement agreement has been negotiated, Your Honor, we would then negotiate the dollar amount, the actual amount of settlement, and I will make clear to all of the parties and all of the attorneys that my view of the settlement has no bearing on liability of any. It is a settlement; it is a resolution of the dispute. **Once we agree** on the settlement amount, then the respective attorneys would send letters out with their signature and my signature to their clients recommending the settlement and the amount they would receive. As we did in the Fench Ltd. Case and the way I settled the Colonial Pipeline case, any of the clients who are not happy with the settlement then had a right to come and meet with me to review their settlement, and then I would make a recommendation to the Court whether their settlement should be raised or lowered or remain the same. **The fourth phase** would be for those clients who are just not happy with the settlement. The way we have handled it in the past is, after reviewing their claim, I have made a recommendation to the Court that their attorney, for example, O'Quinn should have the right to withdraw, and they would have the right to seek other counsel; and as long as the requisite number of plaintiffs agree to the settlement, then the settlement would go forward.[131]

Interviews revealed a broad range of accounts of the special master's meetings with plaintiffs. It was agreed that all resident-plaintiffs met with the master, for the most part on more than one occasion and in groups of roughly 20-30. Some recalled that these groups were divided according to geography. All sides agreed that the master discussed what he felt were the facts of the case and the case's merits with the residents. While certain residents were convinced by their meetings and by data made available to them that the neighborhood was only contaminated at "a minimal amount or level,"[132] others expressed concern over the master's apparent use of the meetings as a means of cajoling settlement by raising doubts about evidence and plaintiffs' chances at trial. Of equal

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[130] Agreed Order to Appoint Special Master, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. April 21, 1998).

[131] Status Hearing Before the Honable David Hittner, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. June 2, 1998), pp. 6-7.

[132] Interview with Kennedy Heights residents, December 12, 2002, via telephone. Residents who reported that they were confident that the contamination posed no danger were not without their own stories of suspected contamination, such as "odor in our water that comes out of the faucet."

concern to residents, particularly some who lived in the vicinity of the NE pit, was the manner in which their concerns were heard and then apparently discarded. For example, it was suggested that the master shared with the small groups a number of issues that would be considered during the process. One resident recounts these issues in a letter to U.S. Representative Sheila Jackson Lee:

> My concerns with the case vary from the frequent presiding judges removed from the case to the apparent disregard of factors, such as the six elements. These elements were argued and discussed in trial and reiterated with residents in a meeting with the mediator as the basis to reach decision on during mediation, per Judge Hittner's orders. The six elements included: (1) the buyout of homes over two of the three pits in the subdivision; (2) relocating residents; (3) transaction cost; (4) clean-up of area for other residents outside the pits; (5) move and replace water lines; (6) personal injury. The proposed settlement award for Kennedy Heights residents appears not to reflect the judge's request.[133]

Another discusses what he perceived to be the master's discussion of weaknesses in plaintiffs' case:

> One of the things that came to my mind, the meeting that we did have with him. His thing was, OK, how many of you all here have ever heard of tort reform? And we were like. And then he said, now ya'll know that there has been tort reform that has taken place in Texas. So it's like, in other words, at this point here, because of tort reform, these particular categories here, you can just forget about these. And that's when one of us rose up a bit, and said "what are you talking about?" And he said all of the things that have happened to everybody. So the mediator's thing was, because of tort reform, you're not going to be able to get what you asked for. He had mentioned that Texas legislature had gotten involved in the whole process of tort reform, and everything, had turned everything around. So it was like he just found this out. He just found this out. And he said, since I know what I'm talking about, these categories here, you know, there's nothing that's going to really be done about all of these.[134]

Unfortunately, no records of the meetings were available for review, making it difficult to reconcile the various accounts of meetings with the special master. However, it is clear in court transcripts that by June, 1998, Mills claimed to have "explained to the O'Quinn clients that part of the settlement would not include a sale of their house, unless it was voluntarily by them to some third party."[135] The master also recalled his general approach to meetings with residents:

> They're never OK with anything. Until you convince them that they can't win their case in the eyes of the law. I'll give you an example. If you're asked to mediate a wrongful death case. The first thing you have to do in a wrongful death case as a mediator is you have to say to the people, are you willing to settle your case for the value that is set in the eyes of the law? If you're not willing to settle your case based on the value as the law sees it, then we need to go home. You don't get over that hurdle in a wrongful death case, in the first five minutes, you might as well give the people their money back and not mediate it. And as a mediator you're wasting your time. You have to sometimes tell the people the hard truth. I do it early, not later. Just like in Kennedy Heights, people had to understand the consequence of the law. I'm a consequence mediator, not a risk mediator. Risk is not what I'm concerned about in mediation. And you don't know what the

[133] Jones, D. (1999). Letter to James Gaston, Chief of Staff, Office of U.S. Representative Sheila Jackson Lee from Kennedy Heights Plaintiff, October 18, 1999.
[134] Interview with Kennedy Heights resident, April 20, 2002, in Houston, Texas.
[135] *Supra* note 131.

consequence is until you have something to lose in the mediation. So my notion with these people was if you all don't understand the law and the consequence of the law, then I'll never be able to work a settlement with you. And you all need to understand that 9 chances out of 10, O'Quinn is gonna get poured out on summary judgment, he's never even gonna get evidence on, and for some reason if you get the one chance in ten that you get a trial, the 5th Circuit will take it away, ten out of ten times. There is no basis for this lawsuit…

Q: So when did you switch from trying to educate them about the case as it stood to the solution that you offered?

A: When I was satisfied that I had the confidence of the community. I never talked to them about solutions until I felt they were educated on the facts and the consequences of the trial.

Q: And so the solution that you offered at first, did that look a lot different from what eventually came to pass?

A: I worked through a series of solutions.

Q: What did the first one look like?

A: What everybody wanted.

Q: Which was?

A: New homes in another community. I let them come up with lots of different solutions that they thought were available and I worked on those solutions and I was not able to obtain their solutions. Then we worked on solutions that I could accomplish. What I'm saying to you is, I knew their solutions were unobtainable, that was OK. Because it's not like the bell was gonna go off and if I didn't get it done a bomb was gonna go off. So I had to let them work through the fact that their solutions were not obtainable. I had to get them some respect for what they wanted even though I knew from the beginning they would never be achieved. They were impossible.

Q: Did that include taking their proposed solution and then trying to work that out with Chevron and the attorneys?

A: I don't work exactly that way. I'm a very proactive kind of negotiator. If you have solutions that make no sense, I'll negotiate with you a different solution. I won't take what you think is a solution and dignify it if it makes no sense. I don't do that.

Q: So what was the first kind of solution that did warrant your bringing it to both sides?

A: The only solution that Chevron was ever gonna agree to was just an aggregate dollar amount. I had to deal with the allocation of it.[136]

In addition to their concerns regarding meetings with the master, residents did not express an understanding of how a final settlement was determined or allocated. The total dollar value was determined through positional bargaining between attorneys for both sides, with the assistance of the special master in terms of information regarding appropriate amounts based on computer-generated settlement models developed by his associates. The details of these discussions are privileged. However, it was generally agreed that some number approaching what plaintiffs' attorneys had prepared for before and during trial was asked for and rejected. The extent to which Chevron's offers changed was not

[136] Interview of Special Master, *Adams et al. v. Chevron U.S.A., Inc.*, April 16, 2002, in Houston, Texas.

clear, although attorneys for Chevron described "a rigorous litigation risk analysis" performed in order to arrive at a settlement offer. The logic was simple: Chevron had spend x amount of dollars on the case to date, and a second trial on the merits would cost at least a certain fraction of that number. In addition, Mills' efforts figured into the decision-making:

> Mills had a formula for distributing money, an amount with that many plaintiffs, trying to figure out how much each plaintiff should get, and I think kind of a combination of how much money we were willing to put up and how much he felt that the plaintiffs would be willing to accept through his formula, we somehow ended up at that $12 million figure.[137]

Complete records of the final settlement or the development of the settlement model were either privileged or unavailable for review. However, it is clear that the model involved, at a minimum, two primary variables: "property" (a function of distance from the NE and SE pits) and "personal" (which was determined as a composite of duration of time spent in the subdivision, the monetary value of certain diseases suffered, and other considerations).[138] Higher dollar values were computed for homes of varying distances from the NE pit, as it had been used for crude oil storage while the SE pit had stored brine. Property awards were determined for each address and divided among the number of plaintiffs who claimed to have lived at the address. The master made an effort to ensure that those living on top of the NE pit had sufficient resources to allow them to purchase a home elsewhere.[139] Review of a map illustrating "Total Property Award" for plaintiffs in the *Adams* case shows that homes above the NE pit were awarded $54,000.[140] By comparison, homes over the SE pit were allocated $15,000. The distribution of property awards appears uniform across the subdivision within a distance of 500 feet from the NE ($25,000 when not directly over the pit) and SE pits ($10,000 when not directly over the pit). At distances greater than 500 feet, the value appears as a continuous function of distance. The NW pit was not factored into the property determinations. Nor was the exposure pathway claimed by plaintiffs (ingestion, inhalation, or absorption of contaminated water through daily activities such as cooking

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[137] Interview of Attorneys for Chevron (in-house and outside counsel), December 18, 2002, via telephone.

[138] Special Master's Report, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. March 24, 2000):

> The Master, in reaching his allocation, has reviewed all of the relevant facts and circumstances in the case including, but not limited to, a determination of the address of each Plaintiff's residents to establish whether their property was in the subdivision known as Kennedy Heights, and if so, the distance from Kennedy Heights, whether the Plaintiff was a real property owner, a relative to a real property owner or an unrelated visitor. Any real property determined to be within Kennedy Heights was further evaluated based on its location within Kennedy Heights. The Master further evaluated each Plaintiff's award based on the length of time the plaintiff lived in Kennedy Heights and based on an examination of each Plaintiff's medical records, questionnaires and interrogatories provided to the Master by the Plaintiff's attorney and other factors.

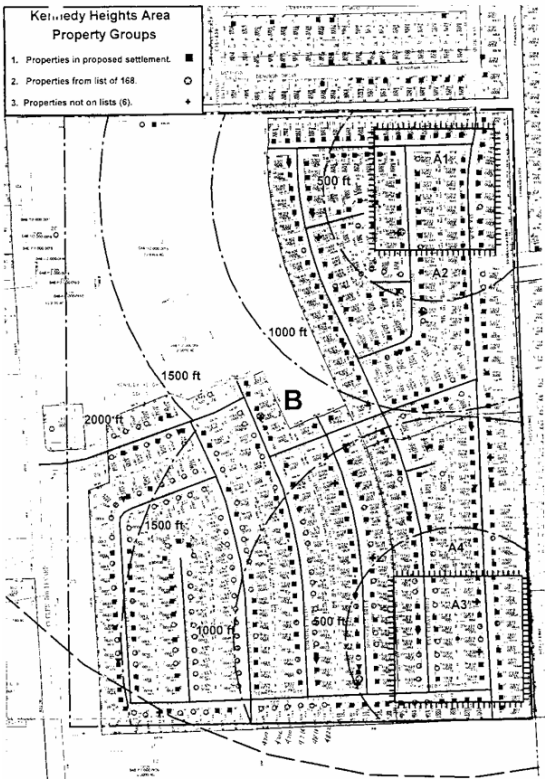
[139] *Supra* note 136:

> I was able to show Chevron based on objective evidence that houses built over a pit have less value than houses that are not built over a pit. And so I took data from the same or similar type of subdivisions and showed how much those houses were selling per square foot, and then I did a model which for 44 houses over the NE pit, I gave those people 100% of the value of their houses, it was like $50,000.

[140] Adams Plaintiffs, Kennedy Heights Litigation, Total Property Award map (no date), obtained from the special master of *Adams et al. v. Chevron U.S.A., Inc. et al.* during interview, April 16, 2002.

and bathing) factored into the model. This makes sense, as the property variable was designed to model property value diminution, which would likely follow a linear distance path rather than a more complicated hypothetical exposure path. It was not possible to determine how these numbers were determined. The special master indicated that he reviewed hedonic pricing models and other estimates provided by plaintiffs and defendants. Residents also stated that the master requested information from them regarding the cost of relocation. Some were not confident that the final system of allocation based on the property variable yielded fair outcomes. For instance, there were reported disagreements over whether "median" or "mean" home values in Houston should be used (residents said that the master preferred to use median values, which they claimed resulted in lower housing value estimates). A broader concern was expressed over the fact that the "stigma" of living in a community that had been repeatedly labeled a "toxic waste dump" had reduced the value of *all* homes in Kennedy Heights substantially. Under this logic, a person living less than 1,000 feet from the center of a pit and receiving $5,000 for property damages would not be able to afford equivalent housing elsewhere in the city.

Figure 3. Kennedy Heights Plaintiffs Represented on a Settlement Allocation Map.



Residents interviewed understood the "personal" variable even less. Review of a map showing personal awards to *Adams* plaintiffs reveals that this variable was not a function of distance. What is clear is that certain residents on Murr Way in the vicinity of the NE pit were offered personal awards far above the average settlement value (some in excess of $50,000 and less than a handful above $100,000).[141] A source of much uncertainty following the release of the settlement amounts, the "personal" variable appears to have been built based on a system of "disease levels" developed by the special master and his team. One sheet lists plaintiffs, their diseases, and a monetary value attached to each disease (i.e., colon cancer victims appear to have been offered $5,000 while those suffering from lupus were offered $25,000). Multiple diseases received the sum of the value attached to each condition. The fact that residents were offered amounts that were not so evenly rounded (e.g., $5,300, $500, $10,700) suggests that other factors, perhaps including time spent in the subdivision, were included in this variable. As one can imagine, the personal variable resulted in a wide variance of

[141] Adams Plaintiffs, Kennedy Heights Litigation, Total Personal Award map (no date), obtained from the special master of *Adams et al. v. Chevron U.S.A., Inc. et al.* during interview, April 16, 2002.

settlement offers, even for people living on top of the NE or SE pit (for instance, three adjacent homes on Lockgate Lane received personal award offers of $3,300, $102,400, and $6,200). To the present, residents who lack a clear understanding of the model or who feel that it was not fairly constructed are embittered by rumors of settlement offers received by their neighbors.

While the mediation was ongoing, residents noticed that much of the attention that had been focused on the case seemingly disappeared "overnight." After decades' worth of concerns over water main breakages, water quality, and disease, discovery of residual contamination, video tapes showing layers of crude oil near Pas-Key's excavation site, and months' worth of testimony and expert witnesses' accounts of their neighborhood, residents were surprised by the speed at which elected officials and political leaders "abandoned" their cause. Part of the explanation for this dynamic can be found in the activities of the special master, who "met with non-party leaders of the African-American community" in 1997 to discuss his duties and interpretation of the case.[142]

A final question remains: why did plaintiffs' attorneys agree to settle the case for $12 million? First, it had become more apparent over time that Judge Hittner would make swift rulings on certain aspects of the case should mediation fail. In a hearing in August 1999, he explains:

> There is a major legal question that I was ready to decide for the last two years on the legal matter as to the basic liability at all of Chevron due to, I guess, the intervening purchase of Log Development. Then, of course, there was the *Daubert* hearing, the expert witness hearing as to, what is it, the water itself first; and then if we got past that, as to the cause, you know, for the folks with their physical ailments.[143]

Second, Hittner had granted several extensions throughout the mediation process, and made it clear in August 1999 that he would not allow further extensions (the agreement had been signed by this point but had yet to be ratified by the residents).[144] Plaintiffs' attorneys, in a letter to residents in March 1999, explained a third source of pressure on their side to settle the case:

> Our recommendation that you accept the settlement is based on a decision issued by the 14th Court of Appeals in Houston in the case of *Hicks v. Humble Oil and Refining Company*. In *Hicks*, the land in dispute had been used for the storage of crude oil in pits back in the 1920's. The land was subsequently sold by Humble (now Exxon) in the 1940's, and several homes were built on the land. People living in the houses became ill and sued Exxon for the damages resulting from their illnesses, asserting the illnesses were caused by contamination of the soil by the oil stored there in the past, which contamination got in the water supply which the plaintiffs drank. Those facts closely parallel the fact pattern in our case. In June of 1998, the Houston Court of Appeals issued the *Hicks* opinion holding that Humble Oil was <u>not legally responsible</u> for any of the illnesses, stating that because the purchaser of the land knew that the land had been used for crude oil storage, Humble owed no duty to those living in the houses ultimately built on the land. Thereafter, lawyers representing the Hicks plaintiffs sought to appeal the case to the Texas

[142] Joint Status Report, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. November 21, 1997).
[143] Hearing before the Honorable David Hittner, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. August 25, 1999), p. 8.
[144] *Ibid*.

Supreme Court, which denied the application and refused to hear the case, making *Hicks* law in Texas.[145]

On March 23, 1999, roughly 2,400 plaintiffs met at the Hofheinz Pavillion basketball court at the University of Houston, and were again called upon to accept the settlement.[146] An attorney asked the group to pause and recite the Prayer for Serenity.[147] Most residents were too broken to protest the choice that they would have to make: either accept their settlement, or be deemed *pro se* (representing themselves, should the court grant motions by O'Quinn and associates to withdraw as counsel)[148] in a case that, should it proceed, will begin by considering strong challenges to Chevron's liability and the admissibility of evidence.[149] A few residents, some of whom had already moved out of Kennedy Heights, refused to accept their settlement allotments (including one resident who declined an offer of more than $50,000) and expressed their concerns in writing to the master, their attorneys, and public officials. They protested the "ethical dilemma" in which they had been placed by the decision, and questioned the true extent of similarity between the *Hicks* case and their own.[150]

In the end, plaintiffs' attorneys entered into a master settlement on July 28, 1999, which set a number of conditions that had to be satisfied by plaintiffs' counsel. Depending on where they resided and their representation, certain percentages of groups of plaintiffs had to elect to participate for the settlement to move forward.[151] The maximum amount of funds to be paid by the Defendants was set at $12 million (later raised to an aggregate amount of $12.9 million), including $4 million for plaintiffs' trial counsel for partial reimbursement of expenses and $400,000 (later raised to $650,000) for the special master.[152] Residents were given the opportunity to meet with the master and discuss any

[145] O'Quinn, J.M. (1999). Letter to Kennedy Heights Residents from John M. O'Quinn, O'Quinn & Laminack, March 1, 1999.
[146] Chambers' Plaintiffs' Response to Motion to Withdraw of John O'Quinn et al from their Representation as their Councel, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. February 9, 2000).
[147] "Lord, grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference."
[148] O'Quinn, J.M. (2000). Letter to Client from John M. O'Quinn, O'Quinn & Laminack, July 28, 2000.
[149] In September 1999, Judge Hittner made the following comments during a hearing: "So the folks who elect – and that's your perfect right – to opt out of any settlement, you had better get a lawyer to come into this case where he or she will say that they are up to speed and ready to represent you, or you'll have to represent yourself. I certainly encourage you to get a lawyer, because on this date – I'm going to give you a date. On that date I'm going to begin writing as to whether this case is legally sufficient and whether or not you've got a case or whether the defense is correct that the whole thing should be poured out. I'm going to start writing on a certain date with no further notice to anybody." *Supra* note 144, p. 35.
[150] In the case of *Hicks et al. v. Humble Oil and Refining Company, Exxon Corporation and Exxon Company U.S.A.*, 970 S.W.2d 90 (Tex App. 1998), the court found that since the Hicks family had notice of the "dangerous condition" (the oil pits) when Thomas Hicks purchased his land, Exxon did not have a legal duty to give notice of the potential effects of the residual oil. Residents in Kennedy Heights continue to claim that they received no notice of the presence of the pits under their properties.
[151] For a certain number of plaintiffs living over the NE pit, the settlement called for 100% acceptance. Other groups had settlement requirements of various percentages below 100%.
[152] Master Settlement Agreement for Plaintiffs Represented by O'Quinn & Laminack, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. July 28, 1999). Amounts were increased by the time the special master filed his report in March 2000. Special Master's Report, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. March 24, 2000).

grievances that they had with the settlement. A total of 3,150 residents settled. An additional 589 did not. The court granted Chevron's motions for summary judgment and dismissed remaining plaintiffs' claims with prejudice on October 1, 2002.[153] Log Development was also granted summary judgment based on limited immunity under the Texas Business Corporation Act, due to their bankruptcy and dissolution.[154]

The EPA performed an Expanded Site Inspection in Kennedy Heights starting in August 1998.[155] Sampling of the subsurface soil, groundwater, and soil gas commenced in June 2000, focusing on areas where EIT had previously documented contamination. The Inspection did not include drinking water samples, as "a review of City and State records indicate that the drinking water supply in the Kennedy Heights neighborhood meets all drinking water standards."[156] Soil samples were taken at depths of 0-2 feet and 4-6 feet (30 near NE pit, 8 near NW pit, and 18 near SE pit). Groundwater samples were collected from existing monitoring wells within the NE pit. Soil-gas samples were collected from properties within the NE pit. TPH levels of up to 16,500 ppm were detected at a depth of 4-6 feet. Traces of VOC's were also found in soil samples, as were traces of contaminants in the groundwater samples. In addition, "a thin oily layer of non-aqueous phase liquid (NAPL) was encountered while taking water level measurements at groundwater monitoring well NE-30."[157] EPA contractors documented hydrocarbon odors at several sampling locations when opening soil core barrels. Visible hydrocarbons were present in a monitoring well and in one of the soil samples.

The EPA developed of a "worst case scenario," where the highest concentration of TPH found would be excavated and spread on dirt where a child would play and come into direct contact with the soil through oral, dermal, and inhalation routes. Because this scenario yielded a hazard quotient less than one, the EPA concluded that "the soils do not present a risk to the residents from exposure to TPH by direct contact with soil."[158] They concluded that the site did not qualify for listing on the Federal Superfund's National Priorities List. However, they noted that the water mains in the area of the NE pit were old and in need of repair. City officials noted at the time that they were prohibited from replacing mains during litigation, and that they would "try to move forward with the replacement."[159] To date, residents say that no work has been carried out to replace the

[153] Final Judgment, *Adams et al. v. Chevron U.S.A., Inc.*, H-96-1462 (S.D. Tex. October 1, 2002).
[154] *Ibid*.
[155] Ecology and Environment, Inc. (2001). Expanded Site Inspection, Final Report. Prepared for U.S. Environmental Protection Agency, Region 6, May 2001.
[156] *Ibid*, p. 2-3 ("However, the EPA has met with both City officials and the residents several times, and the residents' concerns about their drinking water supply remain unresolved.")
[157] *Ibid*, p. 4-7 ("An attempt was made to capture enough of the NAPL to send for laboratory analysis, but there was not a sufficient quantity available for sample collection. A decision was made to go ahead and sample the well, which went dry during purge activities. The well was allowed to recover and a sample was collected for analysis.")
[158] *Ibid*, p. 5-2.
[159] *Ibid*, p. 3-1 ("The piping is cast iron and was installed in a configuration which requires periodic flushing at fire hydrants throughout the neighborhood to eliminate corrosive buildup. Replacement of the existing water mains with new piping was well as additional tap water sampling were both brought up during a meeting with residents and City officials.")

pipes. Some believe that the City is reluctant to act, because "if they dig, they'll find something else."

Discussion

Recent research into court-centered mediation reveals that the procedure, when utilized in civil litigation, is drifting toward bilateral negotiation between attorneys, with clients playing minimal or no role.[160] The originally dominant vision of mediation as guided by the principle of self-determination, where parties actively participate, choose and control decision-making norms, create options for settlement, and control the final decision regarding whether or not to settle, has given way to norms of settlement aimed at case evaluation and closure.[161] This trend is viewed positively by those who ascribe to a transactional model of adjudication and view mediation as a means of efficiently managing mass tort and other forms of complex litigation.[162] In contrast to the transactional model, the notion of "procedural justice" proceeds from an understanding of certain needs expressed by disputants, particularly disadvantaged parties. These disputants value (a) the opportunity to tell their story, (b) control over the telling of their story, (c) knowledge that their story has been considered fairly by a mediator, and (d) signals from a neutral that would suggest that a public institution such as the judiciary values and respects them as members of society.[163] A number of process characteristics that influence procedural justice judgments center around the style employed by the court-appointed neutral. It is clear that the orientation of the mediator in *Adams v. Chevron* influenced not only the decision to settle, but also the judgments of residents who had for years sought closure of their claims and perceptions of where they lived. Thus it is instructive to consider the different mediation styles that are employed in such situations and their ramifications for community members who believed themselves the target of policies that exposed them to serious health risks, possibly on account of the ethnicity of the members of the community.

There are two "ideal types" of mediation styles that have been given careful consideration in the literature: facilitative and evaluative mediation. Facilitative mediation assumes that parties can work collaboratively, provided certain conditions of their interaction are met. Mediators who adopt this style tend to focus on assisting parties in reaching mutually acceptable decisions by clarifying communication, urging an understanding of underlying interests, and creating means through which disputants can gather and interpret information and understand their options. By contrast, evaluative mediation spends little time satisfying interests and focuses on the merits of parties' positions as expressed through the courts. In practice, mediators will often make use of aspects of both facilitative and evaluative mediation. Still, the trend toward evaluative mediation has led some states to adopt court rules governing their behavior. These rules

[160] Welsh, N. (2001). Making deals in court-connected mediation: What's justice got to do with it? *Washington University Law Quarterly*, 79: 787-861.
[161] Welsh, N. (2001). The thinning vision of self-determination in court-connected mediation: The inevitable price of institutionalization? *Harvard Negotiation Law Review*, 6: 1-93.
[162] Rubenstein, W.B. (2001). A transactional model of adjudication. *Georgetown Law Journal*, 89: 317.
[163] Tyler, T.R. (1987). Conditions leading to value-expressive effects in judgments of procedural justice: A test of four models. *Journal of Personality and Social Psychology*, 52: 333-339.

are often modeled after the Model Standards of Conduct for Mediators that was prepared by a joint committee of the American Bar Association, the American Arbitration Association, and the Society of Professionals in Dispute Resolution (now the Association for Conflict Resolution).[164] The Standards emphasize self-determination, mediator impartiality, and the role of professional advice. Let us consider each in term as they relate to *Adams v. Chevron*. While these standards are not incorporated into Texas state laws governing mediator conduct, they allow us to contrast the special master's work with what are viewed as important elements of a mediation process, particularly one that includes a party which feels that it has been denied adequate avenues for obtaining procedural justice.

Self-determination. Self-determination is upheld if the parties' right to decide is protected, parties are not unfairly influenced into settlement, material facts are not misrepresented, and the parties are encouraged to conduct the deliberations in a non-adversarial, respectful manner.[165] When considering the role of the mediator in respecting a disputant's right to self-determination, one must discern whether the neutral engaged in facilitative influence or coercion. Even the most facilitative of mediators uses process considerations to influence how parties interact and the issues that they consider. Coercion is more likely to occur as elements of self-determination are ignored, set aside, or deliberately violated in an effort to settle a case. In *Adams v. Chevron*, there were clear signals from the court that the case was to consider which plaintiffs could be included in a settlement, and what resources should be made available and in what proportion as they related to each disputant. Chevron made it clear from the beginning that settlement would only occur in the *absence* of reference to contamination, links between residual hydrocarbons and disease, water quality, or other matters of medical or epidemiological causality. In this context, plaintiffs were given the opportunity to meet with the mediator, but the utility of their stories of living with contamination was greatly reduced before they even entered the mediation. Further, their ideas about settlement "elements," however implausible given Chevron's stance on each of them, were used only as a means of illustrating their unrealistic nature to the residents. Meetings with the mediator focused on matters of "legal consequence," meaning deliberations were imbalanced in the direction of using claimants' legal standing to reduce what they would be willing to accept in the way of monetary settlement. While there is no evidence that the mediator misrepresented any information in this case, he still undertook the task of translating voluminous records of years' worth of preparation, testing, studies, and findings into a compact picture of why, in his view, contamination did not exist in Kennedy Heights. Any opportunity for the residents to use the mediation process to address their fears of and experiences with contamination would come only when residents were willing to accept this translation of a complex reality with which plaintiffs were most intimately involved.

Impartiality. This principle requires that a mediator disclose of any circumstance that could lead to bias or prejudice in their understanding of a case, views of one or more

[164] Levin, M. (2001). The propriety of evaluative mediation: Concerns about the nature and quality of an evaluative opinion. *Ohio State Journal of Dispute Resolution*, 16: 267-296.
[165] *Ibid*.

parties, or actions in shaping or interpreting proposed options for settlement. There is no evidence that the mediator in *Adams v. Chevron* favored one side over the other. However, his reading of the case and formulation of a view of the extent of contamination, which went beyond his reading of the plaintiffs' likelihood of success at trial, meant that any questions that he raised regarding residents' accounts would be biased in the direction of his conclusions regarding the subdivision. Plaintiffs, who were asked during their meetings with the mediator to suggest what they felt were the "facts" of the case only to see many of them crossed out on a board, had to spend a considerable amount of their very limited time with the mediator either defending their understanding of the facts or coming to terms with the mediator's interpretation. This left little time or energy for an adequate understanding of plaintiffs' interests, which may or may not have differed from what had been represented by their attorneys and may or may not have led to options other than a strict dollar value distributed among individuals.

Professional advice. A mediator who elects not to refer parties to sources of neutral, professional advice and undertakes these tasks himself assumes increased responsibilities. This does not mean that a mediator who is also an attorney cannot provide assessments based on the law, as occurred in this case. However, this role should be undertaken *at the request of the parties* and with a clear explanation of whether the advice is based on a personal reading of the facts of the case and the law or some special knowledge of how a particular judge will rule. It should also avoid directing parties to a certain resolution of the issues at hand. Finally, information provided by the mediator should conform to what that individual is qualified by training or experience to provide. In the case of *Adams v. Chevron*, it is difficult to determine whether information about tort reform, court rulings, and the like were used to provide a realistic account of plaintiffs' options or to encourage timely settlement. What is clear is that very strong statements about the facts of the case were based on readings of evidence by a trained accountant and attorney, not a toxicologist, epidemiologist, environmental engineer, or physician.

One might ask, within the context of complex mass torts claims involving thousands of claimants, how would it be possible for a mediator to engage in more facilitative practice? One would also be correct in asserting that in the case of *Adams v. Chevron*, Judge Hittner expressly called for swift determination of settlement potential when he ordered the case to mediation. Yet shorter timetables and limited areas open to deliberation can be used to *enhance* claimants' perception of procedural justice, should they be presented in a transparent manner and used to focus deliberations on exploring how best to meet underlying interests with what limited resources are available. The mediator in *Adams v. Chevron* did consider how those living over the NE pit could meet their primary interest, safety, by securing resources that could be applied toward their relocation. And despite Chevron's denials of any real exposure pathway that could have resulted in disease among the residents, the mediator allocated part of the settlement toward families suffering from certain diseases that he felt could have been caused by PAH's and other contaminants. He should be commended for his efforts on both accounts. But as the literature on procedural justice would suggest, the *manner* in which these allocations were arrived at can be just as important as the acceptability *per se* of a monetary award to an individual claimant. To this day, uncertainties surrounding the mediation process fuel not only anger and resentment regarding settlement amounts, but

fear and anxiety over what may or may not linger in the soils of Kennedy Heights. Far from options such as relocation *en masse* or site remediation that after a point became untenable, the exploration of lower-cost options such as water main replacement, drinking water monitoring, filters, and sidewalk and yard repair could have more realistically reduced these anxieties, which had been sustained for years and then summarily dismissed by the mediator as pure fantasy.

This discussion is not meant to criticize the actions of any individual involved in the case at issue. None of the standards described have been made into law in Texas. Meetings with the mediator in *Adams v. Chevron* were attended with attorneys for the plaintiffs, who viewed the process as one of integrity. The mediator spent roughly 20 months meeting with thousands of residents, many who were hostile to the idea of settlement. But it is important to illustrate that the use of mediation as an alternative to adjudication is dependent upon the timing of the process, tasks assigned to the mediator, legal and extralegal considerations that affect the positional bargaining of claimants' attorneys, and the extent to which the mediator is willing to uphold certain principles that will increase the perception of procedural justice. Attorneys for the residents of Kennedy Heights, convinced from early on that there was indeed something wrong in the neighborhood that had to be addressed, were nearly always prepared to mediate this case. They had careful medical documentation of personal injuries, financial accounts of property value loss, and psychological reports of emotional distress and a "culture of contamination." But they never really prepared the *residents* for what would ensue should (as with many cases involving environmental justice claims) the final resolution have to be race-neutral, de-linked from experiences with contamination, and focused on the individual rather than the community in its entirety.